MECHANIX ILLUSTRATED

A FAWCETT PUBLICATION

W. H. FAWCETT, JR. president
GORDON FAWCETT secretary-treasurer
GEORGE H. CARL production director

ROGER FAWCETT general manager
RALPH DAIGH editorial director
AL ALLARD art director

ROSCOE K. FAWCETT circulation director
JAMES B. BOYNTON director of advertising
RALPH MATTISON associate art director

WILLIAM L. PARKER editor

ROBERT G. BEASON assistant editor

LAWRENCE SANDERS.....feature editor
J. ROBERT CONNOR.....news editor
HARVEY GARDNER.....associate editor
HELEN E. SLOWIN.....production editor

ROBERT BRIGHTMAN home and shop editor
JOHN J. SMITH.....associate editor
DICK HOWE.....associate editor

JOHN WEBSTER advertising manager

LEONARD ULINE .....art editor
WALTER MESAROS .....art associate
VINCENT TROIANO .....art assistant
ED BRANDON .....art assistant

SPECIAL FEATURES

Forget Something? ..... *Lester David* 70
What's New In Pills ..... *Donovan Fitzpatrick* 72
How To Collect Coins ..... *George Laycock* 92
Making A Cartesian Bottle ..... *Mike Bienstock* 95
The Fine Art Of Box Busting ..... *Carl Sifakis* 100

TOM McCAHILL

Mail For McCahill 53
Picks 10 Best Buys In Economy Cars 65
Tests The Olds 98 84

REGULAR FEATURES

It's New! 74
Bright Idea: Magnetic Nailholder 79
Hunting And Fishing ..... *Wynn Davis* 82
MIMI 83
MMI: He Sells Smells ..... *Bob Willett* 98
Eye Stopper 99
Inventions Wanted! 107

SHORT FEATURES

He Slings Arrows 69
Now See This! 73, 78, 87, 91, 102, 106
Do-It-Yourself Bomb Kits 80
Ritzy Razors 88
These Refrigerators Are Really Cool! 90
Limey Lunacy 94
Face-Lifting Mt. Rushmore 96
Squirrel Cage Car 103
Boats In The Air 104
3 Wheeling 108

DEPARTMENTS

Invention Clinic ..... *Joseph H. Kraus* 18
Dear Editor 22

HOME-CRAFTS-SHOP CONTENTS ON PAGE 8

MARCH, 1959

VOLUME 55, NUMBER 3

Cover photos by Simon Nathan

Permission hereby granted to quote from this issue of this magazine on radio or television, provided a total of not more than 1,000 words is quoted and credit is given to the title of this magazine and issue, as well as the statement, copyright 1959, by Fawcett Publications, Inc.

MECHANIX ILLUSTRATED is published monthly by Fawcett Publications, Inc., Fawcett Bldg., Greenwich, Conn.

ADDRESS ALL MAIL: Subscriptions, change of address, Form 3579 to Circulation Dept., Fawcett Bldg., Greenwich, Conn.; and all editorial and advertising to Fawcett Publications, Inc., 67 W. 44th St., New York 36, N. Y.

Second-class postage paid at Greenwich, Conn., and at additional mailing offices.

EDITORIAL OFFICES: 67 W. 44th St., New York 36, N. Y. ADVERTISING OFFICES: 67 W. 44th St., New York 36, N. Y.; 612 N. Michigan Ave., Chicago 11, Ill.; 1659 Guardian Bldg., Detroit 26, Mich.; 2978 Wilshire Blvd., Los Angeles 5, Calif.; 681 Market St., San Francisco 5, Calif.; 123 S. Broad St., Philadelphia 9, Pa.; Hale Printup & Associates, Langford Bldg., Miami 32, Fla. and 4087 Haverhill Dr., N.W., Atlanta, Ga.

Printed in U.S.A. Copyright 1959 by Fawcett Publications, Inc.

Reprinting in whole or in part forbidden except by permission of the Publishers. Address manuscripts to N. Y. editorial office. Unacceptable contributions will be returned if accompanied by sufficient first class postage. Not responsible for lost manuscripts or photos.

SUBSCRIPTION PRICE: 25c a copy. $3.00 a year in U.S., possessions and Canada. All other countries $6.00 a year. Subscription price to members of the armed forces $2.75 per year. Foreign subscriptions and sales should be remitted by International Money Order in U.S. funds payable at Greenwich, Conn.

MEMBER AUDIT BUREAU OF CIRCULATIONS

MECHANIX ILLUSTRATED

A FAWCETT PUBLICATION

W. H. FAWCETT, JR. president
GORDON FAWCETT secretary-treasurer
GEORGE H. CARL production director

ROGER FAWCETT general manager
RALPH DAIGH editorial director
AL ALLARD art director

ROSCOE K. FAWCETT circulation director
JAMES B. BOYNTON director of advertising
RALPH MATTISON associate art director

WILLIAM L. PARKER editor

ROBERT G. BEASON assistant editor

LAWRENCE SANDERS.....feature editor
J. ROBERT CONNOR.....news editor
HARVEY GARDNER.....associate editor
HELEN E. SLOWIN.....production editor

ROBERT BRIGHTMAN home and shop editor
JOHN J. SMITH.....associate editor
DICK HOWE.....associate editor

JOHN WEBSTER advertising manager

LEONARD ULINE .....art editor
WALTER MESAROS .....art associate
VINCENT TROIANO .....art assistant
ED BRANDON .....art assistant

SPECIAL FEATURES

Forget Something? ..... *Lester David* 70
What's New In Pills ..... *Donovan Fitzpatrick* 72
How To Collect Coins ..... *George Laycock* 92
Making A Cartesian Bottle ..... *Mike Bienstock* 95
The Fine Art Of Box Busting ..... *Carl Sifakis* 100

TOM McCAHILL

Mail For McCahill 53
Picks 10 Best Buys In Economy Cars 65
Tests The Olds 98 84

REGULAR FEATURES

It's New! 74
Bright Idea: Magnetic Nailholder 79
Hunting And Fishing ..... *Wynn Davis* 82
MIMI 83
MMI: He Sells Smells ..... *Bob Willett* 98
Eye Stopper 99
Inventions Wanted! 107

SHORT FEATURES

He Slings Arrows 69
Now See This! 73, 78, 87, 91, 102, 106
Do-It-Yourself Bomb Kits 80
Ritzy Razors 88
These Refrigerators Are Really Cool! 90
Limey Lunacy 94
Face-Lifting Mt. Rushmore 96
Squirrel Cage Car 103
Boats In The Air 104
3 Wheeling 108

DEPARTMENTS

Invention Clinic ..... *Joseph H. Kraus* 18
Dear Editor 22

HOME-CRAFTS-SHOP CONTENTS ON PAGE 8

MARCH, 1959

VOLUME 55, NUMBER 3

Cover photos by Simon Nathan

Permission hereby granted to quote from this issue of this magazine on radio or television, provided a total of not more than 1,000 words is quoted and credit is given to the title of this magazine and issue, as well as the statement, copyright 1959, by Fawcett Publications, Inc.

MECHANIX ILLUSTRATED is published monthly by Fawcett Publications, Inc., Fawcett Bldg., Greenwich, Conn.

ADDRESS ALL MAIL: Subscriptions, change of address, Form 3579 to Circulation Dept., Fawcett Bldg., Greenwich, Conn.; and all editorial and advertising to Fawcett Publications, Inc., 67 W. 44th St., New York 36, N. Y.

Second-class postage paid at Greenwich, Conn., and at additional mailing offices.

EDITORIAL OFFICES: 67 W. 44th St., New York 36, N. Y. ADVERTISING OFFICES: 67 W. 44th St., New York 36, N. Y.; 612 N. Michigan Ave., Chicago 11, Ill.; 1659 Guardian Bldg., Detroit 26, Mich.; 2978 Wilshire Blvd., Los Angeles 5, Calif.; 681 Market St., San Francisco 5, Calif.; 123 S. Broad St., Philadelphia 9, Pa.; Hale Printup & Associates, Langford Bldg., Miami 32, Fla. and 4087 Haverhill Dr., N.W., Atlanta, Ga.

Printed in U.S.A. Copyright 1959 by Fawcett Publications, Inc.

Reprinting in whole or in part forbidden except by permission of the Publishers. Address manuscripts to N. Y. editorial office. Unacceptable contributions will be returned if accompanied by sufficient first class postage. Not responsible for lost manuscripts or photos.

SUBSCRIPTION PRICE: 25c a copy. $3.00 a year in U.S., possessions and Canada. All other countries $6.00 a year. Subscription price to members of the armed forces $2.75 per year. Foreign subscriptions and sales should be remitted by International Money Order in U.S. funds payable at Greenwich, Conn.

MEMBER AUDIT BUREAU OF CIRCULATIONS

For a Successful Career in Radio-Television

Train at Home in Spare Time with N. R. I.

OLDEST and LARGEST

Home Study Radio-Television School

N.R.I. Trained These Men

ENGINEER STATION WHPE

"Thanks to NRI, I operated a successful Radio repair shop. Now I am an engineer for WHPE." VAN W. WORKMAN, HIGH POINT, NORTH CAROLINA

QUICK SPARE TIME CASH

"Knew nothing about Radio-TV when I enrolled. After 15 lessons started repairing sets. My future looks bright." DONALD B. ACKERMAN, MINNEAPOLIS, MINNESOTA

HAS OWN TV BUSINESS

"Quit my job to do Television work full time. I love it and do all right financially." WILLIAM F. KLINE, CINCINNATI, OHIO

Prosperous Fast Growing Industry Offers You GOOD PAY-BRIGHT FUTURE-SUCCESS

It's the trained man who gets ahead—gets the better job, drives a better car, lives in a better home, is respected for what he knows and can do. For a job with a future—find out how you can train at home for Radio-Television.

TODAY'S OPPORTUNITY FIELD

Training PLUS OPPORTUNITY is the ideal combination for success. And today's OPPORTUNITY field is Radio-Television. Over 125 million home Radios plus 30 million sets in cars, plus 40 million TV sets mean big money for trained Technicians. More than 4,000 Radio and TV broadcasting stations offer interesting and important positions. Color television, portable TV sets, Hi-Fi, assure future growth. Find out about NRI. Since 1914—for more than 40 years—NRI has been training ambitious men at home in spare time for Radio-TV. With NRI 50-50 method, you study basic principles AND learn by practicing with actual equipment NRI furnishes. You learn with your hands and your head. You get dependable training, backed up by the reputation of the oldest and largest home study Radio-TV school.

ADD TO YOUR INCOME SOON

$10-$15 A WEEK IN SPARE TIME

Soon after enrolling many start earning extra money fixing sets. Many open their own full time Radio-TV shops after getting NRI Diploma. MAIL COUPON. Get FREE Sample Lesson and 64-page Catalog showing equipment supplied, outlines of courses, opportunities in Radio-TV. Price is low—terms easy. Address: **NATIONAL RADIO INSTITUTE, Dept. 9CC, Washington 16, D. C.**

You Learn Servicing-Broadcasting at Home—By Practicing with Kits N.R.I. Sends

Nothing takes the place of practical experience. That's why NRI training is Learning-by-Doing. With Servicing Course you build Radio shown at top and other equipment. With Communications Course you build Transmitters at left and other equipment. Catalog shows all equipment you get.

Available To VETERANS Under G.I. Bills

SAMPLE LESSON AND CATALOG FREE

MAIL COUPON TODAY

National Radio Institute
Dept. 9CC, Washington 16, D. C.

Mail me Sample Lesson and 64-Page Catalog FREE. (No salesman will call. Please write plainly.)

Name_____ Age____

Address_____

City_____ Zone____ State_____

ACCREDITED MEMBER, NATIONAL HOME STUDY COUNCIL

SKIPPED ME AGAIN!
POOR BURT! HE MISSED OUT ON THAT PROMOTION AGAIN!
I WAS DETERMINED TO MAKE GOOD IN MY JOB...BUT DETERMINATION, I FOUND, WAS NOT ENOUGH!
I HAD PLENTY OF EXPERIENCE. AND THE BOSS SEEMED TO LIKE ME. I LACKED JUST ONE THING— TRAINING!
SORRY, BURT! I KNOW YOU'VE WORKED HERE LONGER. BUT TED HAS THE SPECIAL TRAINING WE NEED. YOUR CHANCE WILL COME ...SOMEDAY!
I. C. S. IS THE OLDEST AND LARGEST CORRESPONDENCE SCHOOL IN THE WORLD. 259 COURSES. PERSONALIZED INSTRUCTION, CAREER GUIDANCE, EASY-PAY PLAN. DIPLOMA TO GRADUATES.
SIX MONTHS LATER.. I.C.S. SENT MY BOSS REGULAR REPORTS OF MY PROGRESS. THEN ONE MORNING...
BURT, I'VE JUST MADE YOU THE ASSISTANT MANAGER OF YOUR DIVISION...AT $15 MORE A WEEK. AND THE WAY YOU'RE GOING NOW, THIS IS JUST THE BEGINNING.
GOSH! THANKS MR. TAYLOR!
I GOT IT, HONEY! I GOT THE PROMOTION! OUR MONEY WORRIES ARE OVER! TODAY'S OUR LUCKY DAY!
TODAY AND THE DAY YOU MAILED THAT I.C.S. COUPON!
WHY NOT MAKE THIS YOUR LUCKY DAY? LET I.C.S. PUT YOU ON THE ROAD TO MORE PAY, RAPID ADVANCEMENT, REAL JOB SECURITY. HERE'S THE FAMOUS COUPON. MAIL IT NOW!

FREE!

I. C. S. CAREER KIT CONSISTING OF...

1. "HOW TO SUCCEED" 32-PAGE GOLD MINE
2. CAREER CATALOG . . . OPPORTUNITIES IN YOUR FIELD.
3. SAMPLE LESSON (MATH) SHOWS I.C.S. METHOD.

For Real Job Security—Get an I. C. S. Diploma! **I. C. S., Scranton 15, Penna.**

Accredited Member, National Home Study Council

INTERNATIONAL CORRESPONDENCE SCHOOLS

ICS

BOX 90382B, SCRANTON 15, PENNA.

(Partial list of 250 courses)

Without cost or obligation, send me "HOW to SUCCEED" and the opportunity booklet about the field BEFORE which I have marked X (plus sample lesson):

ARCHITECTURE and BUILDING CONSTRUCTION
- ☐ Air Conditioning
- ☐ Architecture
- ☐ Arch. Drawing and Designing
- ☐ Building Contractor
- ☐ Building Estimator
- ☐ Carpenter Builder
- ☐ Carpentry and Millwork
- ☐ Carpenter Foreman
- ☐ Heating
- ☐ Painting Contractor
- ☐ Plumbing
- ☐ Reading Arch. Blueprints

ART
- ☐ Commercial Art
- ☐ Magazine Illus.
- ☐ Show Card and Sign Lettering
- ☐ Sketching and Painting

AUTOMOTIVE
- ☐ Automobile
- ☐ Auto Body Rebuilding and Refinishing
- ☐ Auto Engine Tuneup
- ☐ Auto Technician

AVIATION
- ☐ Aero-Engineering Technology
- ☐ Aircraft & Engine Mechanic

BUSINESS
- ☐ Accounting
- ☐ Advertising
- ☐ Business Administration
- ☐ Business Management
- ☐ Cost Accounting
- ☐ Creative Salesmanship
- ☐ Managing a Small Business
- ☐ Professional Secretary
- ☐ Public Accounting
- ☐ Purchasing Agent
- ☐ Salesmanship
- ☐ Salesmanship and Management
- ☐ Traffic Management

CHEMICAL
- ☐ Analytical Chemistry
- ☐ Chemical Engineering
- ☐ Chem. Lab. Technician
- ☐ Elements of Nuclear Energy
- ☐ General Chemistry
- ☐ Natural Gas Prod. and Trans.
- ☐ Petroleum Prod. and Engr.
- ☐ Professional Engineer (Chem)
- ☐ Pulp and Paper Making

CIVIL ENGINEERING
- ☐ Civil Engineering
- ☐ Construction Engineering
- ☐ Highway Engineering
- ☐ Professional Engineer (Civil)
- ☐ Reading Struc. Blueprints
- ☐ Sanitary Engineer
- ☐ Structural Engineering
- ☐ Surveying and Mapping

DRAFTING
- ☐ Aircraft Drafting
- ☐ Architectural Drafting
- ☐ Drafting & Machine Design
- ☐ Electrical Drafting
- ☐ Mechanical Drafting
- ☐ Sheet Metal Drafting
- ☐ Structural Drafting

ELECTRICAL
- ☐ Electrical Engineering
- ☐ Elec. Engr. Technician
- ☐ Elec. Light and Power
- ☐ Practical Electrician
- ☐ Practical Lineman
- ☐ Professional Engineer (Elec.)

HIGH SCHOOL
- ☐ High School Diploma
- ☐ Good English
- ☐ High School Mathematics
- ☐ High School Science
- ☐ Short Story Writing

LEADERSHIP
- ☐ Industrial Foremanship
- ☐ Industrial Supervision
- ☐ Personnel-Labor Relations
- ☐ Supervision

MECHANICAL and SHOP
- ☐ Diesel Engines
- ☐ Gas-Elec. Welding
- ☐ Industrial Engineering
- ☐ Industrial Instrumentation
- ☐ Industrial Metallurgy
- ☐ Industrial Safety
- ☐ Machine Shop Practice
- ☐ Mechanical Engineering
- ☐ Professional Engineer (Mech)
- ☐ Quality Control
- ☐ Reading Shop Blueprints
- ☐ Refrigeration and Air Conditioning
- ☐ Tool Design ☐ Tool Making

RADIO, TELEVISION
- ☐ General Electronics Tech.
- ☐ Industrial Electronics
- ☐ Practical Radio-TV Eng'g'g
- ☐ Practical Telephony
- ☐ Radio-TV Servicing

RAILROAD
- ☐ Car Inspector and Air Brake
- ☐ Diesel Electrician
- ☐ Diesel Engr. and Fireman
- ☐ Diesel Locomotive

STEAM and DIESEL POWER
- ☐ Combustion Engineering
- ☐ Power Plant Engineer
- ☐ Stationary Diesel Engr.
- ☐ Stationary Fireman

TEXTILE
- ☐ Carding and Spinning
- ☐ Cotton Manufacture
- ☐ Cotton Warping and Weaving
- ☐ Loom Fixing Technician
- ☐ Textile Designing
- ☐ Textile Finishing & Dyeing
- ☐ Throwing
- ☐ Warping and Weaving
- ☐ Worsted Manufacturing

Name_____ Age_____ Home Address_____

City_____ Zone_____ State_____ Working Hours_____ A.M. to P.M._____

Occupation_____

Canadian residents send coupon to International Correspondence Schools, Canadian, Ltd., Montreal, Canada. . . . Special tuition rates to members of the U. S. Armed Forces.

Make More Money in One of Today's FASTEST-GROWING Industries

We'll train and establish you in YOUR OWN LIFETIME BUSINESS

U. S. Dept. of Commerce says: 45 million homes in U.S. with $750 million yearly potential in rug and upholstery cleaning. In your town, 2 jobs a day earns $8,750 profit first year. You gain financial success as an independent businessman.

START PART-TIME . . IF EMPLOYED

Get in on the ground floor of a potential $750,000,000 yearly industry . . the home-furnishings cleaning field. Record population growth and home construction have created a great demand for these services. If you qualify for a dealership in your town, you'll be trained by an established dealer and at a training school to expertly clean furnishings, with emphasis on wall-to-wall carpeting and fine upholstered furniture so popular today. Start part-time if employed. As you expand operations, switch to full-time. Alert dealers gross $9.00 hourly. All service rendered on location. No shop needed. If needed, we help finance you. If you are willing to work to secure financial independence, send for full details.

BACKED BY NATIONAL ADVERTISING

You are backed by a national advertising program which is larger than all other similar programs in the industry combined!

Consumer Advertising: Ads dramatizing your unique services reach millions of homeowners through leading magazines as Parents', Canadian Homes & Gardens, House & Garden, McCalls, plus others.

Trade Advertising: More and more retailers are referring customers to Duraclean Dealers for servicing. Key trade journals target local furniture retailers, dept. stores, dry cleaners, decorators, etc., to become agents for you.

To coordinate both trade and consumer campaigns in your town, we provide you with tie-in materials as ad reprints, mailing pieces, display cards plus others.

We Help You Grow

YOUR personal success is of the utmost importance to Hdqtrs, for as you grow so grows the Duraclean Dealer organization. Thus, your initial training is only the start of a continuous assistance program to help build your business. When you write or phone Hdqtrs, you receive prompt, expert counsel from specialists. Among 25 regular services you receive are conventions, regional conferences, product development, tested ads, monthly magazines, etc. Cooperative program and customer satisfaction built this world-wide organization.

Unique Process

Duraclean cleans by *absorption*, utilizing electric Foam-ovator (shown above) which produces a light aerated foam. When spread onto fibers or fabrics, chemicals in foam safely and gently loosens soil and absorbs it like a blotter absorbs ink; thus, eliminating scrubbing, soaking, shrinkage, color run or dry rot. This unique process revitalizes fibers, restores color and adds years to their life. "On location" cleaning also permits use of furnishings again the same day. Customers are so elated they become your best salesmen. You also provide 4 other services to increase profits: **soil retarding, mothproofing, flameproofing** and **spotting.** As a specialist you provide a complete service.

What Dealers Say

W. Lookiebill (St. Louis): My 28th year! Began during depression and built business on good service.

D. Chilcott (N. Platte): Duraclean say gross $9.00 per hour. I gross up to $12.00. Many dealers do much better.

M. Lyons (Chgo): 3rd year should hit $100,000; 2nd was $60,000; 1st was $40,000. Hdqrs help make it possible.

E. Roddey (Hampton, Va.): Did $600.00 first 12 days in January. My business keeps growing each month.

A. Wilson (Tulsa): Made $1,299 this month working alone. Duraclean outperforms all competitors.

Mail Coupon — You Get Free Booklets!

"OWN A BUSINESS" COUPON

DURACLEAN CO., 9-173 Duraclean Bldg., Deerfield, Ill.

WITHOUT OBLIGATION, show me how I may enjoy a steadily increasing life income in my OWN business. Enclose FREE booklets and free details.

Name .....

Address ..... County .....

City ..... State .....

What Manufacturers Say

". . (Duraclean) standards in keeping with service to which . . carpets and consumer are entitled." —*Avisco (American Viscose Corp)*

". . superior to any on-location process with which I'm familiar." —*President, Modern Tufting Co.*

". . we approve this process . . in keeping with better service to Mrs. Housewife." —*Aldon Rug Mills*

Backed by Famous Awards

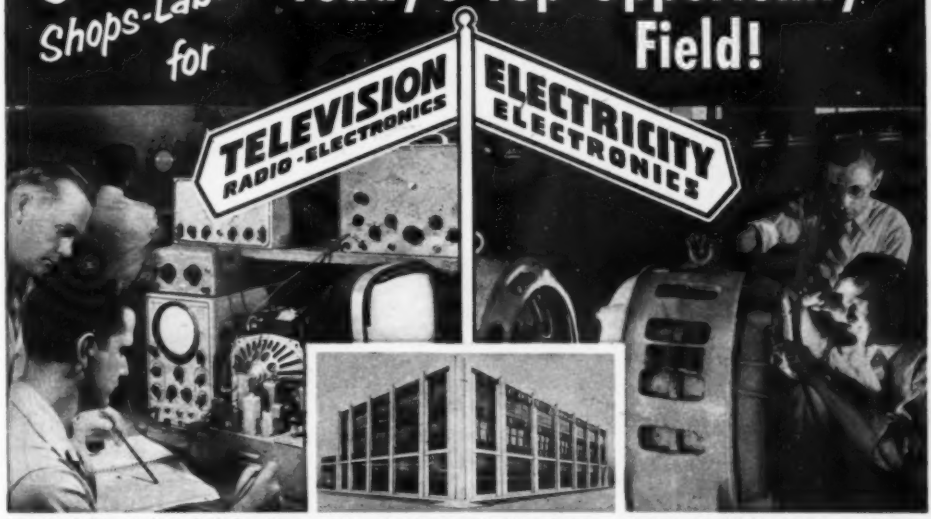
These two important honors conferred on Duraclean give PROOF of your superior services. As a Duraclean Dealer, you will be the only cleaning service in town backed by both these famous seals. No wonder customers buy Duraclean so quickly!

Duraclean Co., 9-173 Duraclean Bldg. Deerfield, Illinois

Train in New Coyne Shops-Labs for

ELECTRONICS

Today's Top Opportunity Field!



Instructor helping students check the wiring and trace the circuits of television receivers.

This modern fire-proof building which is occupied entirely by Coyne, houses the NEW COYNE SHOP-LABS.

Instructor explaining operation and testing of a large Motor Generator.

TELEVISION-RADIO ELECTRONICS

Here at COYNE you're trained for Testing, Trouble-Shooting and Servicing on AM and FM Radio, Auto Radio, Television, Color TV, etc. Thousands of COYNE trained men in good jobs or own well paying TV-Radio businesses.

ELECTRICITY ELECTRONICS

Big opportunities everywhere—city, town and country, in Power Plant Work, Motors, Industrial Electronics, Armature Winding, Home and Factory Wiring, Appliances, Refrigeration, Maintenance, Illumination, etc.

OLDEST AND BEST EQUIPPED SCHOOL OF ITS KIND IN THE U. S.

Send Coupon or Write for

FREE BOOK

"GUIDE to CAREERS"

Whether you prefer Electricity—Television—Radio or Combined Electronics Training this book describes all training offered.

Information comes by mail and no salesman will call.

WE TRAIN YOU IN CHICAGO

Our famous Practical-Technical method gives you practical experience on a massive outlay of equipment—over a quarter of a million dollars worth—plus necessary technical training right here in the *NEW* COYNE *Shop-Labs.*

Training in Refrigeration and Electric Appliances can be included.

Training offered to VETERANS and NON-VETS alike

START NOW—PAY LATER

Enroll now, pay most of tuition after Graduation. Part time employment help for students. Lifetime employment service to Graduates. Starting dates, every six weeks.

To get Free Book and information, mail this Coupon in envelope or Paste on Postal Card, or write to address below.

COYNE ELECTRICAL SCHOOL
Dept. 39-1A, New Coyne Building
1501 W. Congress Pkwy., Chicago 7, Ill.

At no obligation to me send FREE book "Guide to Careers" and details of all the training you offer.

Name_____

Address_____

City_____ State_____

(I understand no Salesman will call.)

B. W. COOKE, JR., President

COYNE ELECTRICAL SCHOOL

FOUNDED 1899

CHARTERED AS AN EDUCATIONAL INSTITUTION NOT FOR PROFIT

1501 W. Congress Parkway, CHICAGO, Dept. 39-1A,

ELECTRICITY • RADIO • TELEVISION • REFRIGERATION • ELECTRONICS

Learn at Home
in your spare time
to Fix Electric Appliances

Better Pay—More Opportunities

Get into a field where there is important work and opportunity for the trained man. Millions of electric appliances are sold every year. Every wired home now has an average of 8. Many of them need service and repair. Owners pay well to have them fixed quickly, properly. This is your opportunity for a better job, your own part time or full time business. NRI can give you the training you need, at home, in your spare time.

Spare Time Earnings Start Soon

Soon after starting you will be able to earn extra cash fixing toasters, clocks, fans, vacuum cleaners, etc., for neighbors and friends. Keep your job while learning and earning. Put spare time to work for you. Work in your basement, garage, spare room. You'll be amazed how easily, quickly you, too, can start earning many extra dollars. NRI shows you how. Even before you finish training your spare time earnings may pay for the course and equipment.

NRI Sends Tester to Learn and Earn

You need proper equipment to service today's automatic appliances. With this course you get parts to build professional type, multi-use Appliance Tester. You learn to use it. Takes guess work out of servicing. Mail coupon for FREE book and Sample Lesson. See how easy it is to learn. Find out about NRI—a school that for more than 40 years has been training men, through home study, for success, good pay jobs. Our reputation, record, experience back up this course. Write now to: National Radio Institute, Dept. CC9, Washington 16, D. C.

FREE *Lesson and Book Mail this NOW!*

NATIONAL RADIO INSTITUTE
Dept. CC9, Washington 16, D. C.
Send me Lesson and Book Free. No Salesman will call.

Name ..... Age .....

Address .....

City ..... Zone ..... State .....

ACCREDITED MEMBER NATIONAL HOME STUDY COUNCIL

MI HOME CRAFTS SHOP

continued from page 2

SPECIAL FEATURES

Three-Dollar Washing Machine 110
Midget Sports Car 116
A Pleasant Laundry Room 140

HOME AND SHOP

Modern Breakfront 112
Black-Top Patio 124
Sit Down And Shine Up 128
Easy-Open Desk Tray 135
Folding Ping-Pong Table 166
Brush-Dusting 170
Calking 171

PAINTING

Fresh Paint Tips 115

RADIO AND HI-FI

Resonating Diaphragm Speaker 132

BOATS AND BOATING

Make Your Own Sails 136
Power For The Dory 139

AUTOMOTIVE

Has Your Car Got The Shakes? 146

ASTRONOMY

The Amateur Telescope Maker's Page ..149

PHOTOGRAPHY

Monthly Photo Contest 150
Darkroom Dryer 152

DEPARTMENTS

Golden Hammer Award Winners 122
Shop Tips 126
MI's Hardware Store 130

NOW! at a price you can afford!

MAKE MORE MONEY in TELEVISION RADIO-ELECTRONICS

BETTER...MORE COMPLETE...LOWER COST... WITH NATIONAL SCHOOLS SHOP-METHOD HOME TRAINING!

BETTER... Training that is proved and tested in Resident School shops and laboratories, by a School that is the OLDEST and LARGEST of its kind in the world.

MORE COMPLETE... You learn ALL PHASES of *Television-Radio-Electronics.*

LOWER COST... Other schools make several courses out of the material in our ONE MASTER COURSE . . . and you pay more for less training than you get *in our course* at ONE LOW TUITION!

These two FREE books will show you how!

You get all information by mail . . . You make your own decision . . . at home! NO SALESMAN WILL CALL

TOP PAY...UNLIMITED OPPORTUNITIES LIFETIME SECURITY CAN BE YOURS!

You are needed in the Television, Radio, and Electronics industry! Trained technicians are in growing demand at excellent pay— in ALL PHASES, including Servicing, Manufacturing, Broadcasting and Communications, Automation, Radar, Government Missile Projects.

NATIONAL SCHOOLS SHOP-METHOD HOME TRAINING, with newly added lessons and equipment, trains you in your spare time at home, for these unlimited opportunities, including many technical jobs leading to supervisory positions.

YOU LEARN BY BUILDING EQUIPMENT WITH KITS AND PARTS WE SEND YOU. Your National Schools course includes thorough *Practical* training—YOU LEARN BY DOING! We send you complete standard equipment of professional quality for building various experimental and test units. You advance step by step, perform more than 100 experiments, and you build a complete TV set from the ground up, that is yours to keep! A big, new TV picture tube is included at no extra charge.

EARN AS YOU LEARN. We'll show you how to earn extra money right from the start. Many of our students pay for their course—and more—while studying. So can you!

LESSONS AND INSTRUCTION MATERIAL ARE UP-TO-DATE, PRACTICAL, INTERESTING. Every National Schools Shop-Method lesson is made easy to understand by numerous illustrations and diagrams. All instruction material has been developed and tested in our own Resident School Shops, Laboratories and Studios.

SEND FOR INFORMATION TODAY . . . it can mean the difference between SUCCESS and failure for you! Send for your FREE BOOK "Your Future in Television-Radio-Electronics" and FREE Sample Lesson. Do it TODAY, while you are thinking about your future. It doesn't cost you anything to investigate!

YOU GET...

- 19 Big Kits—YOURS TO KEEP!
- Friendly Instruction and Guidance
- Job Placement Service
- Unlimited Consultation
- Diploma—Recognized by Industry
- EVERYTHING YOU NEED FOR SUCCESS!

SHOP-METHOD HOME TRAINING COVERS ALL PHASES OF INDUSTRY

1. Television, including Color TV
2. Radio AM & FM
3. Electronics for Guided Missiles
4. Sound Recording and Hi-Fidelity
5. FCC License
6. Automation and Computers
7. Radar & Micro-Waves
8. Broadcasting and Communications

RESIDENT TRAINING AT LOS ANGELES

If you wish to take your training in our Resident School at Los Angeles, the world's TV capital, start NOW in our big, modern Shops, Labs and Radio-TV Studios. Here you work with latest Electronic equipment . . . professionally installed . . . finest, most complete facilities offered by any school. Expert, friendly instructors. Personal attention. Graduate Employment Service. Help on finding home near school . . . and part time job while you learn. Check box in coupon for full information.

GET THE BENEFITS OF OUR OVER 50 YEARS EXPERIENCE

Approved for GI Training

MEMBER

NATIONAL SCHOOLS
Los Angeles 37, Calif.

NATIONAL TECHNICAL SCHOOLS
WORLD-WIDE TRAINING SINCE 1905

MAIL NOW TO
NATIONAL SCHOOLS, Dept RA-39
4000 S. FIGUEROA ST. LOS ANGELES 37, CALIF.

Rush free TV-Radio "Opportunity" Book and sample lesson. No salesman will call.

NAME _____ AGE _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____
☐ Check if interested ONLY in Resident School training at Los Angeles.
VETERANS: Give date of Discharge _____

94.6% OF BAILEY GRADUATES ARE EMPLOYED AT TOP PAY IN THE FIELDS WHICH THEY WERE TRAINED!

DIESEL-AUTO MECHANICS DESPERATELY NEEDED!

We have a far greater demand for our students than we can fill!

We can show you an actual waiting list of leading companies throughout the world who have tried Bailey graduates — found them outstanding, and are coming back for more!

Bailey Graduates are Successful . . . RECEIVE BIG PAY — HAVE SECURE FUTURE!

The Famous Bailey Course prepares you for BOTH Diesel and Gasoline Mechanics.

This is a must-due to the advent of using Diesel principles, such as 'Fuel Injection' on passenger cars . . . use of gasoline engines for starting Diesel engines, etc. You learn all this at Bailey in the amount of time ordinarily required to learn just one of these subjects, **ALL FOR THE PRICE OF ONE.**

Don't be satisfied with a 'futureless', one-type job — learn how you can make **big money** now! Write today for Free Booklet that takes you on a step-by-step camera tour through our spacious, modern shops — See Bailey students in action as they Learn-by-doing with the Famous Bailey Method of training!

We provide you with housing and part time jobs while in school, plus nation-wide placement service for graduates.

BAILEY Technical SCHOOLS

1652 S. GRAND ST. LOUIS 4, MO.

MAIL TODAY!

Please mail immediately this free booklet without obligation.

FREE BOOKLET

Name.....

Address.....

City..... State.....

APPROVED FOR VETERAN . . . NON-VETERAN

"I'M MAKING MORE THAN $1,000 A MONTH

C. KAMA

Haven't Touched Bottom Yet!"

—reports Chas. Kama, Texas, one of many who are "cleaning up" with orders for PRESTO. Science's New Midget Miracle Fire Extinguisher. So can you!

Amazing **new** kind of fire extinguisher. Tiny "Presto" does job of bulky extinguishers that cost 4 times as much, and are 8 times as heavy. Ends fires fast as 2 seconds. Never corrodes. **GUARANTEED for 20 years! Over 3 million sold: Sells for only $4.95.**

Show it to civil defense workers, owners of homes, cars, boats, farms, etc. and to stores for re-sale—make good income. H. J. Kerr reports $20 a day. Wm. Wydallis, $15.20 an hour. Write for FREE Sales Kit. No obligation.

MERLITE INDUSTRIES, Dept. P-109 *Presto Div.*, **114 East 32nd Street, New York 16, New York**
IN CANADA: Moss Co., Ltd., 371 Dowd Street, Montreal 1, P. Q.

New Table Top Invention Puts You In...

PROFITABLE RUBBER STAMP BUSINESS

Home Operators now make $9.40 AN HOUR in business once monopolized by a few big companies

Special rubber stamps bring high prices—cost only pennies to make on new, low-cost table top machine. Take 27 cents worth of material, make perfect stamps, the kind businesses and offices now buy by the dozen at $1.80 each. Make up to $9.40 an hour. Start in spare time in your own home. Run machine on kitchen table using ordinary electrical outlet. Make any kind of stamp. We'll send you free information without obligation about this established, highly profitable business, now open to individuals for the first time. For free information send name today on a post card to

Rubber Stamp Div., 1512 Jarvis Ave., Dept. R-4-C, Chicago 26, Ill.

HOME-IMPORT BUSINESS . . . .

Men, women. Make big profits buying low cost imports abroad (see examples at left) and selling to friends, stores or by mail order. Famous world trader guides you—shows you how to find thousands of exotic imports for full or spare time business, how to **pocket profits in advance on foreign drop shipment plan.** Full details FREE! Airmail reaches us overnight. Write Today!

MELLINGER CO., 1717 Westwood
Dept. X-263. LOS ANGELES 24, CALIFORNIA

I'll Send You This Handsome SAMPLE CASE-FREE

and Show You How to Make Up to $30.00 in a Day

Mail coupon for this Free Tailoring Sample Case packed with 100 beautiful, big-value suit and overcoat fabrics. Take orders from friends, fellow-workers, others, for fine quality, made-to-measure clothes. Pocket big cash profits in advance. Because wearing our suits and overcoats brings more orders, we make it easy for you to get your own clothes without 1c cost. No experience is needed. SATISFACTION GUARANTEED. SEND NO MONEY. Just fill out and mail coupon—today!

W. Z. GIBSON, INC., 500 South Throop Street
DEPT. L-484 CHICAGO 7, ILLINOIS

W. Z. GIBSON, INC., Dept. L-484
500 S. Throop St., Chicago 7, Ill.

Dear Sir: I WANT A MADE-TO-MEASURE SUIT TO WEAR AND SHOW, without paying 1c for it. Rush details and Sample Kit of actual fabrics, ABSOLUTELY FREE.

NAME..... AGE.....

ADDRESS.....

CITY..... STATE.....

LEARN ACCOUNTING

for a BETTER JOB

...MORE MONEY

A SHORT STREAMLINED COURSE TO PREPARE YOU QUICKLY FOR YOUR START IN A SUCCESSFUL ACCOUNTING CAREER!

Free Sample Lesson Will PROVE You Can Master The Training

You need no special talents to be a success in Accounting. You do not even need a preliminary knowledge of bookkeeping. All you need is the will to win—the will to work—and if you apply yourself you, too, can get into the permanent bigger-money class.

Demand for Trained Bookkeepers and Accountants far exceeds the supply—and this demand is increasing every day. A capable accountant should never have any trouble getting a job—and at better than average earnings.

We Guide You Step By Step

Through more than 50 years' experience in training hundreds of thousands of successful accountants, including nearly 5,000 CPA's, we have developed through the LaSalle problem method a practical training in sound accounting principles and practices designed to prepare you rapidly for countless numbers of high paying bookkeeping and accounting positions.

The success of LaSalle accounting graduates has resulted from their knowledge and application of the principles acquired thru Basic and Practical Accounting, Principles of Accounting and Cost Accounting training, offered in our step-by-step accounting program.

Federal Income Tax is included to give you the necessary training to qualify for the many opportunities available to bookkeepers and accountants with this valuable knowledge.

Success in mastering the training is assured through the guidance of expert accountants and CPA instructors. You complete the lessons right in your own home, in your spare time, advancing as rapidly as your time and ability permit.

Send For Sample Lesson And Free Book, "Opportunities In Accounting"

Send the coupon today—our FREE booklet "Opportunities in Accounting" will be sent promptly along with a sample lesson. It explains fully how we train you from the ground up—or from where you are now—according to your individual needs.

Get all the facts. The cost is low—terms easy. Don't pass this page without tearing out the coupon and mailing it promptly. It can be the means of your success—more money—a better job. Get our FREE booklets and judge for yourself.

ACCREDITED MEMBER NATIONAL HOME STUDY COUNCIL

LEU

SEND FOR FREE BOOK

LaSalle Extension University

A Correspondence Institution

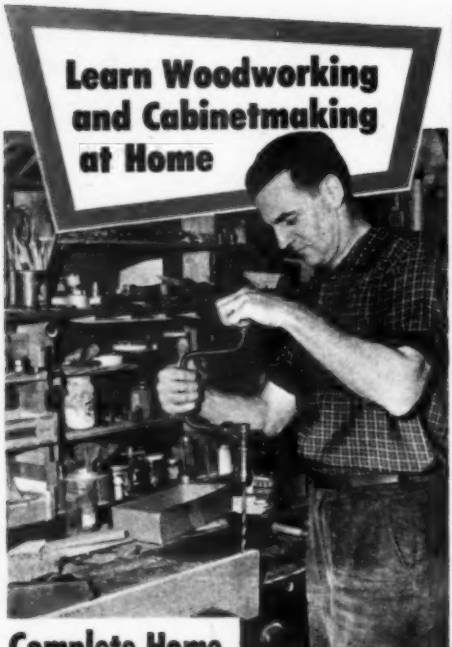
Dept. 3493H, 417 S. Dearborn St., Chicago 5, Ill.

Please send me, free of all cost or obligation, a sample lesson in Accounting ... also, your latest illustrated book, "Opportunities in Accounting."

Name.....*Age*.....

Address.....

City, Zone, State.....



Complete Home Training Course Now Available

Today—it's easy to acquire the skills and craftsmanship of fine woodworking and cabinetmaking with Interstate's *complete* "shop method" course. Prepared by expert instructors, the course consists of 22 profusely illustrated training manuals containing more than 1100 pages of instruction. Covers *all* phases of woodworking, including selection of woods, planning and laying out projects, correct use and care of all hand and power tools, joint making, cutting, assembling, finishing, simple upholstery, etc. Over 75 learn-by-doing instruction projects give work bench training and experience in actual construction. Course is approved for beginners and professionals alike.

Interstate Training Service
PORTLAND 12, OREGON

Accredited Member, National Home Study Council

SEND FOR FREE BOOKLET TODAY

INTERSTATE TRAINING SERVICE
Dept. F-4 Portland 12, Oregon

Please send free booklet and information on your complete course in Woodworking and Cabinetmaking.

Name _____
Address _____
City _____ Zone ____ State _____

Shrinks Hemorrhoids New Way Without Surgery Stops Itch—Relieves Pain

For the first time science has found a new healing substance with the astonishing ability to shrink hemorrhoids and to relieve pain—without surgery.

In case after case, while gently relieving pain, actual reduction (shrinkage) took place.

Most amazing of all—results were so thorough that sufferers made astonishing statements like "Piles have ceased to be a problem!"

The secret is a new healing substance (Bio-Dyne*)—discovery of a world-famous research institute.

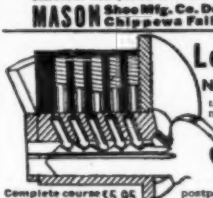
This substance is now available in *suppository* or *ointment form* under the name *Preparation H.** Ask for it at all drug counters—money back guarantee. *Reg. U.S. Pat. Off.

A POSTCARD CAN PUT YOU IN A FINE BUSINESS!

Rush Card Today for FREE Selling Outfit!

Get into a profitable business without spending 1c! Rush postcard for powerful FREE Sales Outfit that makes it easy to take orders for Mason's fast-selling line, including warm insulated Jackets, Boots, featuring Air-Cushion innersoles—over 190 dress, sport and work styles for men, women! Friends, people where you work, buy fast—pay you big profits. Just 2 combination shoe-jacket sales a day pay you up to $660 monthly EXTRA CASH! Folks must buy from you—Mason products never sold by stores! Start now! Rush postcard for FREE Outfit!

MASON Shoe Mfg. Co. Dept. F-473 Chippewa Falls, Wis.



Locksmithing AND KEY MAKING

New Made Easy! Practical up-to-date course teaches you how to pick locks, decode, make master keys, repair, install, service, etc. New self-instruction lessons for every handyman, homeowner, carpenter, mechanic, service station operator, fix-it shop, hardware dealer, gunsmith. 53 easy illustrated lessons. Full price only $5.95

Complete course $5.95 postpaid or C.O.D. plus postage. Satisfaction or refund guaranteed. ... now only
Nelson-Hall Co., 210 S. Clinton St., Dept. C8-3, Chicago 6, Ill.

27 months for engineering degree

Realize your dream of a career: higher income, a better life. BACH. SC. DEGREE in 27 *months* in Elect. (Electronics or Power major), Mech., Civil, Chem., Aero. Engineering. *In 36 Months* in Business Administration (Gen. Bus., Acctg., Motor Transport Mgt.). For earnest, capable students. Small classes. Enrollment limited. More professional class hours. Well-equipped labs. Modest costs. Veteran approved. Year-round operation. Beautiful campus. Enter June, Sept., Jan., Mar. *Write J. R. McCarthy, Director Admissions, for Catalog and "Your Career" Book.*

TRI-STATE COLLEGE 639 College Avenue Angola, Indiana

OPERATE EARTH MOVING EQUIPMENT

Learn to operate bulldozers, cranes, motor scrapers, crawler tractors, draglines, off-highway dump trucks, etc., on 1,700 acre Greer Training Area 60 miles S. W. of Chicago, Ill., on Route 66. Courses include operation, equipment care, preventive maint., stake reading, etc. Minimum classroom instruction. You learn by actually operating the equipment. 200 hour (5 week) complete course in the operation of bulldozers, loaders, scrapers, dump and off-highway trucks as low as $375. Classes start every Monday. Reserve your space today. Approved for vets ☐ and civilians ☐

MECHANIC TRAINING

Complete Mechanics Course covering Diesel engine; transmissions; torque converters; fuel injection systems; track assemblies; final drive assemblies, steering systems; idlers; rollers; power transfer systems; cable control systems; hydraulic control cylinders & welding pertaining to heavy equipment such as bulldozers, scrapers, loaders, off-highway trucks, etc. Course time—540 hours—10 weeks to 13½ weeks. Convenient payment plan. Write for details. Approved for vets ☐ and civilians ☐

Greer TECHNICAL INSTITUTE
ATT: I. C. Hutch, Box 278, Braidwood, Ill.

SOMETHING **NEW*** HAS BEEN ADDED TO THE DeVRY TECH TRAINING PROGRAM

Prepare in Spare Time At Home for a

JOB THAT PAYS REAL MONEY

in TELEVISION-RADIO-ELECTRONICS

Many DeVry-trained men who now hold good jobs paying real money were once looking for opportunity, yet wondering if they needed advanced schooling, special experience, or higher math. They clipped a DeVry Tech coupon, mailed it in—and were pleasantly SURPRISED! Now they work in one of today's fastest-growing fields—TELEVISION-RADIO-ELECTRONICS. Many have their own profitable service shops. DeVry Tech's "Learn-by-Seeing," "Learn-by-Reading," "Learn-by-Doing" training made the difference! You, too, may train at home the DeVry Tech way with wonderful, helpful movies, clear texts and valuable home laboratory equipment—or in our well-equipped Chicago or Toronto Training Centers.

Now something NEW* has been added to help you learn more by "doing." You can choose to build and keep your own top quality 6-speaker STEREOPHONIC SOUND SYSTEM that will provide thrilling enjoyment for years to come. Plans are furnished so that you can also build your own speaker cabinets—or we can tell you where to buy them. DeVry Tech's specially designed Stereo System includes:

- **Turntable with Stereo cartridge**
- **Stereo Amplifier**
- **Stereo Pre-Amplifier**
- **2 Cross-Over Networks**
- **Six Speakers: two 12-in., two 8-in., two 3-in.**

When you build your own equipment, you learn about the working parts. You can repair, adjust, maintain. You learn by doing—the DeVry Tech way. You put basic principles into "on-the-job" practice.

VACUUM TUBE VOLT METER

5-INCH WIDE BAND OSCILLOSCOPE

***NEW! Build Your Own 6-Speaker HIGH FIDELITY STEREOPHONIC SOUND SYSTEM**

. . . another wonderful DeVry advantage

Special SHORT COURSE in High Fidelity Sound Reproduction including Stereophonic Systems also available. Ideal for hobbyists, music lovers and those wanting to ADD to their incomes.

GET 2 FREE BOOKLETS!

Clip the coupon now for two booklets that answer many questions about your chances for success in this field. "Electronics and YOU" and the remarkable "Pocket Guide to Real Earnings" (just off the press) are yours without obligation.

MANY OPTIONS!

NOW . . . DeVry Tech men can take their choice of any or all of the quality equipment shown above: The *Stereo System* . . . the *Scope and Meter* . . . a 21-inch *TV Set* (not pictured) . . . or ALL THREE. But no matter which way you do it, you get practical home training at its best . . . the kind you need to get started in the fast-moving Electronics field. Send coupon for details.

EMPLOYMENT SERVICE

DeVry Tech offers real, down-to-earth employment service to help you toward a good job after graduation — even provides help in starting your own servicing business.

"One of North America's Foremost Electronics Training Centers"

Accredited Member of National Home Study Council

DeVRY TECHNICAL INSTITUTE

4141 BELMONT • CHICAGO 41, ILL. • Formerly DeFOREST'S TRAINING, Inc.

MAIL TODAY FOR FREE FACTS

DeVry Technical Institute
4141 Belmont Ave., Chicago 41, Ill., Dept. MI-3-P

Please give me your two FREE booklets, "Pocket Guide to Real Earnings" and "Electronics and You," and tell me how to prepare to enter one or more branches of Electronics.

NAME _____ AGE _____
PLEASE PRINT

STREET _____ APT. _____

CITY _____ ZONE ____ STATE _____

☐ Check here if subject to military training.

DeVry Tech's Canadian Training Center is located at 636 Roselawn Avenue, Toronto 12, Ontario

2053

Comforting Facts about

WOLVERINE WORK SHOES

PLUS THESE COMFORT FEATURES—

• FOAM RUBBER CUSHION INSOLE WITH SWEAT-PROOF LEATHER COVER • RIBBED STEEL SHANK • CHOICE OF SOLES TO FIT YOUR JOB

WOLVERINE
ROCKFORD, MICHIGAN

Service Oxfords
Work Shoes • Boots
Safety Shoes

MAIL ORDER BUSINESS

How to Start a Profitable Business of Your Own at Home or in a Small office. Amazing new instruction course shows you how to run a good mail order business, spare time or full time. Up-to-date, practical training—a treasure-house of the best plans and practices being used TODAY by successful operators. **Only $5.95. Complete—Satisfaction Guaranteed!** This is BIG. You get 34 money-making lessons in 5 separate volumes, all in one shipment. You must be satisfied or your money back immediately. Full price only $5.95, postpaid—or C O D plus postage. Nothing more to pay! Order "Mail Order Course" today.
Nelson-Hall Co., 210 S. Clinton St., Dept. 9CR-3. Chicago 6, Ill.

Print Your Own

Cards, Stationery, Advertising, Circulars, labels, photo and movie titles, church work, tags, etc. Save money. Sold direct from factory only. Raised printing like engraving, too.

Own a Printing Business

Print for Others. Good Profit. Have home shop. Junior press $15; Senior $29 up. We supply everything. Easy rules. Pays for self in short time. Write for free catalog of outfits and all details.
KELSEY PRESSES, B-9 Meriden, Conn.

LEARN MEAT CUTTING AT NATIONAL
Pay After Graduation

The steady dependable trade of Meat Cutting taught easily in 8 short weeks. YOU LEARN BY DOING under actual meat market conditions in big modern school at Toledo.

For beginners or men with experience. Get a profitable store of your own. Remember, PEOPLE MUST EAT! Big pay jobs. Free employment help. Thousands of successful graduates.

Buying, cutting, percentage, pricing, advertising, selling, etc. A complete retail meat education. National School established 36 years. Get National training NOW. Pay your tuition in easy weekly payments after you graduate. Send coupon for FREE school catalog—TODAY. G.I. approved.

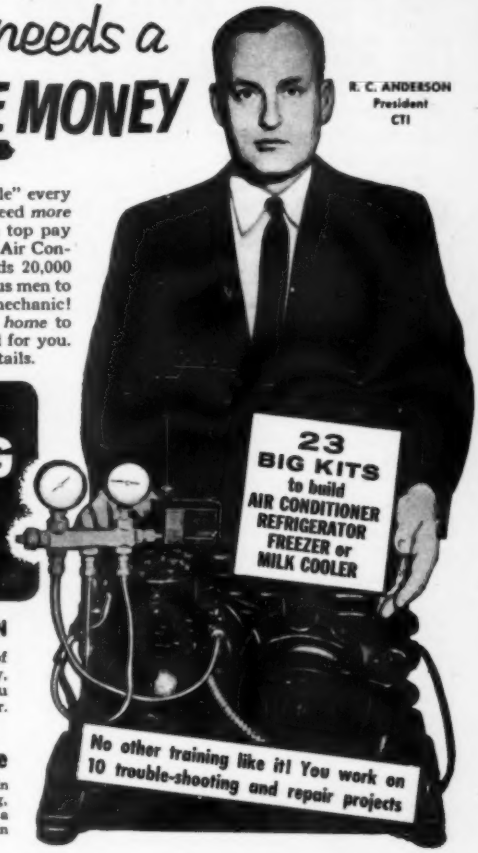
National School of Meat Cutting, Inc., Dept. 52-P, Toledo 4, Ohio

Send me your FREE school catalog on National Training at Toledo in Meat Cutting, Meat Merchandising and Self Service Meats. No obligation. No salesman will call.

Name..... Age.....
Address .....
City..... State.....
Approved for Veterans

Here's the BEST DEAL YET-

for the man who needs a BETTER JOB-MORE MONEY



R. C. ANDERSON
President
CTI

If you're just "breaking even"... if you're "in the hole" every month... if your wife wants to look for work—you need *more money*, a *better job!* You can *have* a good job with top pay and security in the old, established, but *fast-growing* Air Conditioning and Refrigeration industry. This field needs 20,000 newly-trained mechanics every year. It needs ambitious men to open service shops. *It needs you!* Don't say you're no mechanic! We know that. We also know *we can train you at home* to become a skilled mechanic. CTI has a real good deal for you. *Just fill in and mail coupon* and we'll rush full details.

NOW YOU CAN LEARN
AIR CONDITIONING
AND REFRIGERATION
by practicing at home with real equipment!

YOU GET "FIELD EXPERIENCE" AS YOU TRAIN

You train at home in spare time. CTI sends you 23 big kits of parts and tools. You assemble a commercial-type, heavy-duty, ¼ h.p. refrigeration high-side (illustrated at right.) Then you build an air conditioner, refrigerator, freezer or milk cooler. All equipment included with training! No extra cost.

You Get Kits Like These

At left is photo of tools included in just one kit. You get other tools, tubing, much equipment. Kits are sent on a planned schedule so that you learn in easy stages. You learn fast, too!

In another kit (right) you get motor, fan, pulley, service tools. Kits develop skill, let you get experience, eliminate years of low-pay apprenticeship.

Add to Your Income by Earning Cash as You Train

CTI training is practical, just like working on actual jobs. Like other students, you'll want to do repair work for profit soon after starting. Many students pay their tuition this way, add to their incomes, even get started in a business. Get the facts about this. *Mail coupon.*

COMMERCIAL TRADES INSTITUTE • 1400 Greenleaf Ave. • Chicago 26, Illinois

YOUR BIG CHANCE TO OPEN A SERVICE SHOP

Want to be independent—be your own boss? The air conditioning and refrigeration field is one of the best. It's big, uncrowded, packed with opportunity. Start small and grow big. Many students do service work on a monthly fee basis—do repairing for shops, food stores, meat markets, etc. Others answer home calls. In time, they build up a customer list, open a shop. You could, too!

FIRST GET THE FACTS—THEN DECIDE

MAIL COUPON TODAY FOR 2 FREE BOOKS

COMMERCIAL TRADES INSTITUTE
1400 GREENLEAF AVENUE DEPT. R-557
CHICAGO 26, ILLINOIS

Rush me your booklet, *Success in Air Conditioning & Refrigeration*, and *Sample lesson*. Both FREE.

Name_____ Age____
Address_____
City_____ Zone____ State____

"TRAINING YOU CAN TRUST"

Now! YOU CAN SAVE ON ANY HOME BUILDING OR REMODELING JOB!

For Beginner and Expert—Brand-New Library that Shows How To Do Every Step in Modern Home Building

WHETHER you're a beginner or expert—you can save time and thousands of dollars doing *any* of these jobs:

Build, repair or *remodel* kitchens, bathrooms, cabinets, closets, attics, basements. *Do* foundations, roofs, framing, masonry, much more. Brand-new PRACTICAL BUILDING LIBRARY shows *right* way to do *any* building or remodeling job—from patching plaster cracks to building complete 6-room ranch house *yourself!*

Experts Guide You Step-by-Step
Professional Results Guaranteed

FREE PLANS for 3-Bedroom Ranch House

FOUR big volumes. 1207 pages. Over 680 drawings, diagrams. Covers every step in modern home construction and repair. No guesswork. *No experience needed.* Even complicated blueprints seem like A-B-C to you. Tells *how* houses are constructed, *what* materials to use, *where* special details are. Expert illustrated instructions make it easy to do a "pro" job EVERY TIME. On-the-job methods. Step-by-step directions. Tips on buying materials, power tools, exterior and interior finishing, insulation, foundations, driveways and MUCH MORE.

Professional Results Guaranteed—because you learn *only* professional methods. Time-, work-, and money-saving tips as useful to craftsmen as to beginners.

Try Complete Library Free!

Send no money. Just mail coupon for complete 4-volume Library. Pay nothing. If Library doesn't pay for itself within 10 days, return and forget it. Mail coupon TODAY to: McGRAW-HILL Book Co., Dept. MX-3, 327 West 41st Street, New York 36, New York.

FREE 10-DAY TRIAL COUPON

McGraw-Hill Book Co., Dept. MX-3,
327 W. 41st St., New York 36, N. Y.

Send for FREE examination the 4-volume Practical Building Library. Also send FREE set of plans for 3-bedroom ranch house (mine to keep in any case). If not delighted, I may return Library within 10 days and owe nothing. Otherwise, I will send $3.95 then, and $4 a month for 4 months (plus small shipping charge), a substantial saving on price of Library.

Name _____
(Please Print Plainly)
Address _____
MX-3
City _____ Zone _____ State _____

☐ SAVE shipping charges by checking here and enclosing $3.95 WITH coupon. Same return-refund privilege guaranteed.

AMAZING NEW GEM DISCOVERY "DIAMONDITE"

ALL THE BEAUTY OF BLUE WHITE DIAMONDS

Such brilliant fire, real sparkle, and blue white color that no one will believe they're synthetic, 58 facets, expertly cut, guaranteed for life against scratching, chipping or breaking. Delivered by air mail ready to mount in ring, brooches, etc. Round, Marquise, or Emerald Cut. Only $4.95 per carat, from 1 carat, up to seven. Money back guarantee. Specify number of carats and cut.

ONLY $4.95 per carat

EMPIRE MDSE. CO.
4 No. Third Avenue, Dept. D-210, Mount Vernon, N. Y.

FREE GERMAN STEEL HUNTING KNIFE

4-INCH BLADE

We give you handiest hunting and fishing knife you've ever had! Has 4-INCH LONG highly tempered steel blade—VERY SHARP! Attractive handle. We send knife FREE to acquaint you with our below-wholesale bargains. Please send 25c for handling. NO LIMIT—but send 25c handling for each knife. Order TODAY!
HUNTING KNIFE, Dept. K-381, Box 881, St. Louis, Mo.

Secrets of VENTRILOQUISM *Now Revealed!*

Easy to learn to 60 to 90 days with our Home Study Course. **RESULTS GUARANTEED.** Make Money! Be Popular! Have Fun! Big Opportunity! Radio, Television, Stage Appearances! For Free Information regarding price and terms, WRITE. You must state your age. Dummy Catalog 25c.

MAHER HOME COURSE OF VENTRILOQUISM
Box 36, Studio MI-3, Kensington Station
Detroit 24, Michigan

ENGINEERING DEGREE IN 27 MONTHS

B.S. degree (27 mo.): Aero., Chem., Civil, Elec., Mech. & Electronics. **B.E. (30 mo.):** Aero., Chem., Civil, Elec., Mech., Metal. **B.S. (36 mo.):** Math., Chem., Physics. Prep courses. Demand for grads. Campus. 20 bldgs; dorms, gym. Low rate. Earn board. G.I. appr. Enter March, June, Sept., Dec. Catalog. **1039 E. Washington Blvd., Fort Wayne 2, Ind.**

Keeping pace with progress

INDIANA TECHNICAL COLLEGE

REAL ESTATE — BE A BROKER

PAYS BIG! SEND FOR FREE, BIG, ILLUSTRATED CATALOG NOW! Graduates report making substantial incomes. Start and run your own business quickly. Men, women of all ages, learn easily. Course covers Sales, Property Management, Appraising, Loans, Mortgages, and related subjects. **STUDY AT HOME** or in classrooms in leading cities. Diploma awarded. Write TODAY for free book! No obligation.

FREE BOOK TELLS HOW

Approved for World War II and Korean Veterans

WEAVER SCHOOL OF REAL ESTATE (Est. 1936)
2020M Grand Avenue Kansas City, Mo.

RUPTURED

BE *FREE* FROM TRUSS SLAVERY

Surely you want to THROW AWAY TRUSSES FOREVER, be rid of Rupture Worries. Then Why Do you put up with wearing a griping, chafing and unsanitary truss the balance of your life? If you do, it will NOT be through necessity but through choice on your part.

Now there is a new modern **Non-Surgical** treatment that is designed to permanently correct rupture. These **Non-Surgical** treatments are so certain, that a Lifetime Certificate of Assurance is given. Write today for our New FREE Book that gives facts that may save you painful, expensive surgery. Tells **how non-surgically** you may again work, live, play, love and enjoy life in the manner you desire. There is no obligation.

Excelsior Medical Clinic, Dept. H5124, Excelsior Springs, Mo.

INVENTORS

Learn how to protect your invention. The U. S. Patent Laws provide that any new and useful art, machine, article of manufacture, or composition of matter, or any new and useful improvement thereof, may be patented if the act of invention is involved. Therefore, every inventor with a valuable invention should take advantage of the Patent Laws and proceed for patent protection in order to safeguard his rights.

A patent gives the inventor the exclusive right to prevent others from making, using, or selling the invention claimed in the patent for a period of seventeen years.

The Patent Laws were enacted for the benefit of the inventor to give him protection for the features of his invention which are patentable. These features must be properly and concisely set forth and claimed in a formal application for patent, in order to comply with the requirements of the Patent Laws. For that reason, unless the inventor is familiar with patent matters, he should engage a competent registered patent attorney or agent to represent him. We are registered to practice before the U. S. Patent Office and are prepared to serve you in the handling of your patent matters.

A specially prepared booklet entitled "Patent Guide for the Inventor", containing detailed information with respect to patent protection and procedure, together with a "Record of Invention" form will be promptly forwarded to you without obligation upon request.

CLARENCE A. O'BRIEN & HARVEY JACOBSON

Registered Patent Attorneys

93-C DISTRICT NATIONAL BUILDING

WASHINGTON 5, D. C.

Invention Clinic

Joseph H. Kraus

In this column each month Mr. Kraus will answer as many letters as space permits on those subjects he feels to be of widest general interest. Time does not allow him to reply to any letters except those printed here. Address your questions to the Invention Clinic, *Mechanix Illustrated*, 67 West 44 St., New York 36, N. Y.

Sportsman's Oven

Quincy A. Murphree of Wauneta, Neb., has plans for a lighter, sturdier folding camp oven. Would it sell?

If this is as good as you believe it to be, sportsmen will want it. But can you market and distribute it? The problem will be to locate a manufacturer, since camp stoves and ovens have been patented and some are on the market. A patent search should tell whether or not you have something original. Be very cautious unless you know you can market the product.

Kitchen and Lawn Gadgets

Jacques A. Jodoin of Lynn, Mass., sends photographs and a description of a kitchen cabinet-table combination. He also outlines some ideas for producing a combination grass mower and edger. What should he do with these ideas?

There are many homes that could use your combination cabinet and table. Have your attorney report on a patent search. If your design is protectable there are plenty of manufacturers who might attempt the production.

Seemingly you have not settled in your own mind exactly how you intend to go about making a lawn mower and edging tool. In one presentation you speak of doing both jobs at one time, then you reverse your approach perhaps because you realized that one or the other operation might need to be done singly. I recommend that you clarify your ideas, then make a model to see if the tool works.

INVENTOR'S TIP OF THE MONTH

Carbon paper is the bane of the secretary's life. Being so thin makes it hard to handle—and it must be thin so that the maximum number of copies can be made. Other copying systems are either intended for making many more copies than the typist need ordinarily provide or, in the case of photographic copying systems, they are relatively expensive. Develop a substitute which will dispense entirely with carbon paper and you'll have something salable; make it easy to correct the copy and thousands of working girls will bless you.

Auto Molding Fastener

Ralph McKay of Fort Lauderdale, Fla., has developed a system for fastening any width of molding to car bodies. Can he benefit from this idea?

You might have a search made. Maybe redesigning a part will give you grounds for patenting. Perhaps your best bet would be to try to sell the present manufacturer on how good your idea is. Do not send the details until he agrees to pay you a certain sum if he produces and sells your item. Or, better yet, to pay you for disclosing your idea to him. Submit any agreement to your attorney to be sure of a complete understanding.

Replaceable Switch

Peter P. Mayzik of Hollywood, Calif., has patented an electric switch which may be replaced merely by plugging it in. He says he can guarantee that no shocks, shorts or electrical fires will result from the use of this item. [*Continued on page 20*]

INVENTORS

If you believe that you have an invention, you should find out how to protect it. The first step is to have a search made of the prior pertinent U. S. patents. If a report on this search indicates that the invention appears patentable you can apply for a patent, and the specifications and claims should be prepared.

The firm of McMorrow, Berman & Davidson, with offices in Washington, D. C., is qualified to take the necessary steps for you. We can make a preliminary search on your invention, advise you whether we think it can be patented, and prepare your application for patent.

Unless you are fully familiar with the U. S. Patent Laws, we recommend that you engage the services of a Registered Patent Attorney to protect your interests. The patent laws are *your* laws. A patent gives you the right to prevent others from making, using or selling the invention claimed in your patent for a period of 17 years.

Use these patent laws for your protection. Investigate whether your invention can be patented. If you have what you believe to be an invention, we suggest that you have this firm make a search for you.

Send for a copy of our Patent Booklet entitled "How To Protect Your Invention," containing information about patent protection and patent procedure. Along with this we will also send you an "Invention Record" form, for your use in writing down and sketching details of your invention. We will mail them promptly. No obligation. They are yours for the asking.

McMORROW, BERMAN & DAVIDSON

Registered Patent Attorneys

PATENTS • COPYRIGHTS • PATENTS

1393 VICTOR BUILDING, WASHINGTON 1, D. C.

Inventors

If you consider your invention valuable, take these necessary preliminary steps promptly to protect it by applying for a United States patent.

Sketch and describe your invention. (For convenience in starting action on your invention, use "Evidence of Invention" form offered below.)

Sign, date and have this invention disclosure witnessed by two people capable of understanding your invention.

Have us make a preliminary search among U. S. patents already granted for similar types of invention.

We then prepare a report for you on the probable patentability of your invention and recommend your further course of action.

This firm is registered to practice before the U. S. Patent Office. We are available to assist you in the preparation and prosecution of your application for patent.

We shall be glad to send you promptly and without obligation, an instructive booklet—"Patent Protection for Inventors"—and our convenient "Evidence of Invention" form.

VICTOR J. EVANS & Co. Merlin M. Evans
REGISTERED PATENT ATTORNEY
550-C MERLIN BUILDING, WASHINGTON 6, D. C.

Invention Clinic

[*Continued from page* 18]

There is no indication that your item has the approval of the Underwriters Laboratories, who are concerned with performance under test conditions. What you need is acceptable approval. You need to establish that the two components of the switch can be made for the price quoted, and you need to get this item accepted by a company with a good reputation. It would be too bad to wire a house with these switches and then have them fade from the market.

Vehicle Crash Curtain

Raymond Potts of Brantford, Ont., has a patent pending on a vehicle crash curtain which drops down inside the windshield when the car comes to a sudden stop or decelerates rapidly. How can he interest manufacturers?

You will have a tough time proving that your system is better than a good safety belt. There are many times during an average auto trip when your curtain will fall into operating position even though the occupants of the car merely sway forward. This may bring on dangers which do not now exist. I doubt that any manufacturer will talk business with you until you establish the value of the protection this system affords.

Non-Squirting Beer Can Opener

F. A. Shea of Portsmouth, Va., says he has designed, built and used for five years a beer can opener which prevents squirting. What do we think about this idea?

At least 50 other inventors have submitted suggestions for a similar purpose. Most recommend an absorbent material to cover the area while the point is driven into the can. Be very cautious about patenting anything for which

[*Continued on page* 24]

INVENTORS

Send for PATENT INFORMATION Book and INVENTOR'S RECORD without obligation

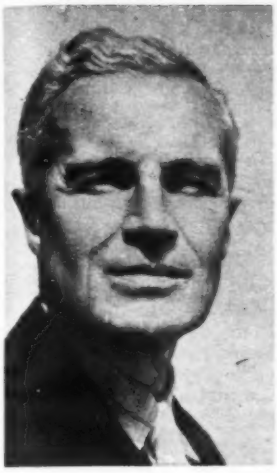
GUSTAVE MILLER
35 Mt Warner Building
Washington 4, D. C.

REGISTERED PATENT ATTORNEY
ASSOCIATE EXAMINER
U. S. PAT. OFF. 1922-1929
Patent Attorney & Advisor
U. S. NAVY DEPT. 1938-1947
PATENT LAWYER

INVENTORS

U. S. Patents protect your inventions. Our free book of "Instructions on Patent Procedure for Inventors," also "Certificate of Invention" form sent without obligation.

C. A. SNOW & CO.
REGISTERED PATENT ATTORNEYS
427 SNOW BUILDING WASHINGTON 1, D. C.



I'd like to give this to my fellow men...

while I am still able to help!

I was young once, as you may be—today I am older. Not too old to enjoy the fruits of my work, but older in the sense of being wiser. And once I was poor, desperately poor. Today almost any man can stretch his income to make ends meet. Today, there are few who hunger for bread and shelter. But in my youth I knew the pinch of poverty; the emptiness of hunger; the cold stare of the creditor who would not take excuses for money. Today, all that is past. And behind my city house, my summer home, my Cadillacs, my Winter-long vacations and my sense of independence—behind all the wealth of cash and deep inner satisfaction that I enjoy—there is one simple secret. It is this secret that I would like to impart to you. If you are satisfied with a humdrum life of service to another master, turn this page now—read no more. If you are interested in a fuller life, free from bosses, free from worries, free from fears, read further. This message may be meant for you.

By Victor B. Mason

I am printing my message in a magazine. It may come to the attention of thousands of eyes. But of all those thousands, only a few will have the vision to understand. Many may read; but of a thousand only you may have the intuition, the sensitivity, to understand that what I am writing may be intended for you—may be the tide that shapes your destiny, which, taken at the crest, carries you to levels of independence beyond the dreams of avarice.

Don't misunderstand me. There is no mysticism in this. I am not speaking of occult things; of innumerable laws of nature that will sweep you to success without effort on your part. That sort of talk is *rubbish!* And anyone who tries to tell you that you can *think* your way to riches without effort is a false friend. I am too much of a realist for that. And I hope you are.

I hope you are the kind of man—if you have read this far—who knows that anything worthwhile has to be *earned!* I hope you have learned that there is no reward without effort. If you have learned this, then you may be ready to take the next step in the development of your karma—you may be ready to learn and use the secret I have to impart.

I Have All The Money I Need

In my own life I have gone beyond the need of money. I have it. I have gone beyond the need of gain. I have two businesses that pay me an income well above any amount I have need for. And, in addition, I have the satisfaction—the deep satisfaction—of knowing that I have put more than three hundred other men in businesses of their own. Since I have no need for money, the greatest satisfaction I get from life, is sharing my secret of personal independence with others—seeing them achieve the same heights of happiness that have come into my own life.

Please don't misunderstand this statement. I am not a philanthropist. I believe that charity is something that no proud man will accept. I have never seen a man who was worth his salt who would accept something for nothing. I have never met a highly successful man whom the world respected who did not sacrifice something to gain his position. And, unless you are willing to make at least half the effort, I'm not interested in giving you a "leg up" to the achievement of your goal. Frankly, I'm going to charge you something for the secret I give you. Not a lot—but enough to make me believe that you are a little above the fellows who merely "wish" for success and are not willing to sacrifice something to get it.

A Fascinating and Peculiar Business

I have a business that is peculiar—one of my businesses. The unusual thing about it is that it is needed in every little community throughout this country. But it is a business that will never be invaded by the "big fellows". It has to be handled on a local basis. No giant octopus can ever gobble up the whole thing. No big combine is ever going to destroy it. It is essentially a "one man" business that can be operated without outside help. It is a business that is good summer and winter. It is a business that is growing each year. And, it is a business that can be started on an investment so small that it is within the reach of anyone who has a television set. But it has nothing to do with television.

This business has another peculiarity. It can be started at home in spare time. No risk to present job. No risk to present income. And no need to let anyone else know you are "on your own". It can be run as a spare time business for extra money. Or, as it grows to the point where it is paying more than your present salary, it can be expanded into a full time business—overnight. It can give you a sense of personal independence that will free you forever from the fear of lay-off, loss of job, depressions, or economic reverses.

Are You Mechanically Inclined?

While the operation of this business is partly automatic, it won't run itself. If you are to use it as a stepping stone to independence, you must be able to work with your hands, use such tools as hammer and screw driver, and enjoy getting into a pair of blue jeans and rolling up your sleeves. But two hours a day of manual work will keep your "factory" running 24 hours turning out a product that has a steady and ready sale in every community. A half dollar spent for raw materials can bring you six dollars in cash—six times a day.

In this message I'm not going to try to tell you the entire story. There is not enough space on this page. And, I am not going to ask you to spend a penny now to learn the secret. I'll send you all the information, free. If you are interested in becoming independent, in becoming your own boss, in knowing the sweet fruits of success as I know them, send me your name. That's all. Just your name. I won't ask you for a penny. I'll send you all the information about one of the most fascinating businesses you can imagine. With these facts, you will make your own investigation. You will check up on conditions in your neighborhood. You will weigh and analyze the whole proposition. Then, and then only, if you decide to take the next step, I'll allow you to invest $15.00. And even then, if you decide that your fifteen dollars has been badly invested I'll return it to you. Don't hesitate to send your name. I have no salesmen. I will merely write you a long letter and send you complete facts about the business I have found to be so successful. After that, you make the decisions.

Does Happiness Hang on Your Decision?

Don't put this off. It may be a coincidence that you are reading these words right now. Or, it may be a matter that is more deeply connected with your destiny than either of us can say. There is only one thing certain: If you have read this far you are interested in the kind of independence I enjoy. And if that is true, then you must take the next step. No coupon on this advertisement. If you don't think enough of your future happiness and prosperity to write your name on a postcard and mail it to me, forget the whole thing. But if you think there is a destiny that shapes men's lives, send your name now. What I send you may convince you of the truth of this proverb. And what I send you will not cost a penny, now or at any other time.

VICTOR B. MASON
1512 Jarvis Ave., Suite M-4-C
CHICAGO 26, ILLINOIS

• *Hopeful*

That tranquilizer dart that can be shot into an animal to enable his pursuers to take him without harming him (Jan. MI)—could this suggest similar weapons for use on escaped lunatics, criminals and maybe enemy soldiers? I sincerely hope so.

Peter Shaw
Los Angeles, Calif.

• *March MI Mystery*

The same guy who counted sheep by counting the legs and dividing by four also kept track of his chickens and cows by counting both heads and legs. If he counted 78 legs and 35 heads, how many cows and chickens did he own? (From Mathematical Puzzles, G. Mott-Smith, Dover Pub., New York.)

• *That's Our Baby*

I went out and bought a doll for my little girl. It said "Mama" at the store, I thought, but now I swear it says "My-my" or "Mi-Mi." What do you guys think about that?

Jack Larue
Montreal, Que.

Does she look like the doll on page 83?

• *Booklegger*

I have to sneak MI into the house because of that article Coffins For Your Pets (Jan. MI). My wife keeps the ashes of our parakeet Flomac in a little Statue of Liberty. Your article made fun of that kind of thing, so now you're banished.

Ever Faithful
Chicago, Ill.

• *Flatterer*

As a subscriber to your magazine I find that when the mailman brings a new copy of MI it is best for me if I do not open it right away. If I do I don't put it down until I read it completely through. This is the answer to the cartoon book.

Robert W. Thompson, Jr.
Montgomery, Pa.

Thanks—sort of.

• *Scoffer*

Boy, that Seagoing Saucers story in the Jan. issue sure gave me a horselaugh. I never saw anything so ridiculously impossible in my life. Where do you guys get off, publishing junk like that?

O.B.L.
Toledo, O.

Have you ever seen a ridiculous jet vapor trail, watched a helicopter's impossible progress or listened to the Sputnik's horselaughs as it beeps overhead? Frank Tinsley says nothing is impossible—and he should know. See the letter below.

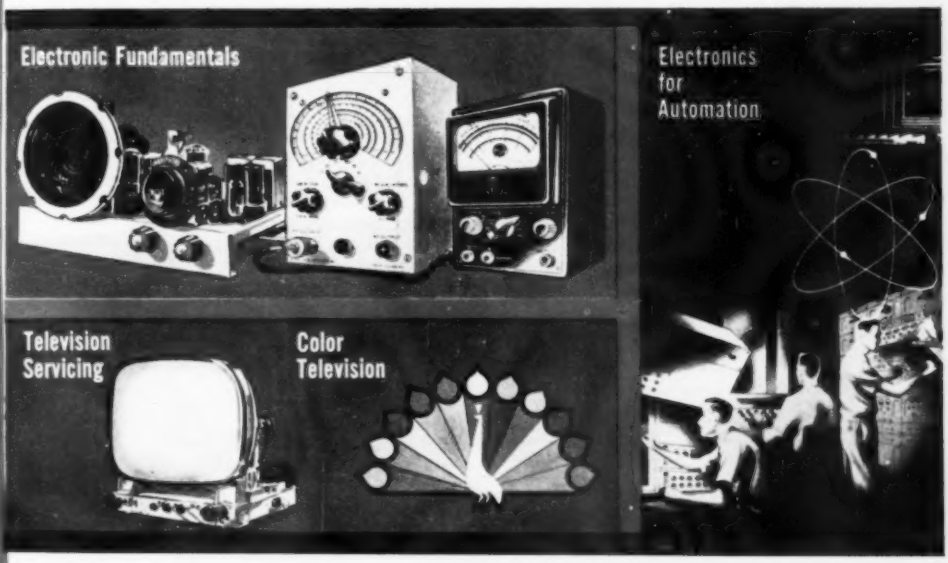
[*Continued on page* 31]

LET RCA TRAIN YOU IN ELECTRONICS

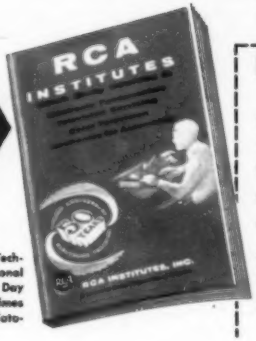
RCA Institutes celebrates Fifty Years of Electronic Training by introducing its newest Home Study Course . . .

ELECTRONICS FOR AUTOMATION

. . . Now you have *four* comprehensive courses for your electronic training . . . from basic electronic theory to the more advanced principles of color TV and Automation.



Send for our 64 page Home Study Catalog FREE!



RESIDENT SCHOOL offers Technical Institute and Vocational School Courses in Electronics. Day and Evening classes start 4 times each year. Resident School Catalog sent free on request.

Practical work with the very first lesson. Pay-as-you-learn. You need pay for only one study group at a time.

RCA INSTITUTES, Inc. Home Study School, Dept. MI-39
A Service of Radio Corporation of America
350 West Fourth Street, New York 14, N. Y.

Without obligation, send me the FREE catalog of Home Study Courses. No salesman will call.

Name .....
Please print

Address .....

City ..... Zone ..... State .....

Korean Vets! Enter Discharge Date .....

CANADIANS — Take advantage of these same RCA courses at no additional cost. No postage, no customs, no delay. Send coupon to: RCA Victor Company, Ltd., 5001 Cote de Liesse Rd., Montreal 9, Quebec

To save time, paste coupon on postcard.

DRAFTSMEN

CASH BIG PAY CHECKS!

Train Now for more success, greater security

LEARN AT HOME IN SPARE TIME
(or at college in Chicago)

Check the want ads in any newspaper—SEE the big-pay opportunities open to you as a draftsman. What's more, you can learn this well-paid, prestige profession at home—quickly, easily! No special talent needed. Get complete, step-by-step Chicago Tech lessons in the mail, spend a few pleasant hours studying each week. In a short time you'll be a well-trained draftsman, ready to take your pick of many good jobs. Act now!

FREE INFORMATION—MAIL COUPON TODAY!

Get FREE TRIAL LESSON plus information about C.T.C. practical training. Learn what successful Chicago Tech graduates say about high pay and opportunities in drafting. No charge, or obligation.

CHICAGO TECHNICAL COLLEGE

C-283 Tech Bldg., 2000 So. Michigan Ave.
Chicago 16, Illinois

Mail me FREE lesson with facts about big opportunities in DRAFTING.

Name..... Age.....

Address .....

City..... Zone..... State.....

INVENTORS

PROTECT YOUR INVENTION BY A U. S. PATENT. SEND FOR FREE "INVENTION RECORD" FORM AND "PATENT INFORMATION EVERY INVENTOR SHOULD HAVE"

CARL MILLER
REGISTERED PATENT ATTORNEY
WOOLWORTH BLDG., 36th FLOOR, 39B
NEW YORK CITY

Invention Clinic

[*Continued from page* 20]

so many people have provided so many different solutions, all of them workable. Why have these attracted so little attention? Well, why should a brewer give away a more expensive opener which will sell no more cans of beer? The one chance for sale is through manufacturers selling to variety stores.

Atomic Turbine

Jack F. Ellis, Jr., of East St. Louis, Ill., has designed an atomic turbine which does not need either heat exchanger or condenser. He believes that he can build a model using electricity to demonstrate the principle. How can he get more information about critical mass, shielding, etc.?

First you should learn the purposes of heat exchangers and condensers. Perhaps you will if you build a model to run by electric power, then measure the power output and actually test for efficiency. It is not enough to establish that your turbine will run. It must be more efficient than any other, or it should show substantially the same efficiency plus other advantages, if you expect to gain a favorable reaction. The energy obtained from enriched uranium or any similar source may be likened to heat from wood, coal, gas, oil or electricity. Hence, critical mass, shielding, handling, etc., need not be considered at all.

Copies Of Patents

J. Val Strough of Oakland, Calif., asks: "How can I obtain copies of patents mentioned in MI, and how much are they?"

Send 25 cents in cash, certified check, or money order, for each copy of a patent desired, together with patent number and name of inventor to U. S. Patent Office, Superintendent of Documents, Washington 25, D. C. •

INVENTORS NEEDED AT ONCE

If you have an invention you wish to sell outright or license on royalty, write us at once. We are seeking inventions of household items, games, toys, sports items, tools, and mechanical and technical devices. Patented or unpatented. For further information and free brochure outlining manufacturers' requirements, royalty rates, send name (no drawings, please) on letter or postcard at once.

KESSLER CORPORATION, Dept. D-63, Fremont, Ohio

INVENTIONS WANTED

If you want to market, or sell, your invention for cash or royalties, Write for our Free Booklet. Send no drawings. We also welcome hearing from firms, or private capital, wishing to review inventions in any field. We will be glad to send notice of our clients inventions.

GLOBAL MARKETING SERVICE

2439 77th Avenue Dept. MD Oakland 5, Calif.

DON'T BE HALF-TRAINED!

Be A Master Technician

NOW... ONE modern master home training course IN ALL 3 PHASES

AIR CONDITIONING - REFRIGERATION ELECTRICAL APPLIANCES

ALL AT ONE LOW TUITION

only National Schools gives you this complete training at no extra cost

YOU GET AND KEEP ALL THESE TOOLS AND INSTRUMENTS

Incomplete training limits your earning power, even disqualifies you for top-pay jobs. The big service companies require *complete*, all-phase training. **If you open your own shop,** you'll be called upon to service and repair *all types* of refrigerators, air conditioners and appliances. With *complete* training—as only National Technical Schools can give you—you can accept *every* job, make *big profits all year round.*

MEMBER

NATIONAL TECHNICAL SCHOOLS

WORLD-WIDE TRAINING SINCE 1905

4000 SO. FIGUEROA ST., LOS ANGELES 37, CALIF., U. S. A.

FUTURE BRIGHT FOR TRAINED MASTER TECHNICIANS

Over 30,000 new technicians must be trained annually. You are needed to help service and repair the 50 million air conditioners, refrigerators and electrical appliances that will need fixing this year alone. No wonder the Master Technician has steady work, at high pay, year after year. He can go places in his own business or with a manufacturer, dealer, distributor or department store. Armed with all-phase training, his earning power is unlimited.

THE MOST FOR LESS

We give you illustrated Shop-Tested Lessons and Manuals...many other training aids...privilege of CONSULTATION with our instructors and engineers. Every lesson, every manual has been SHOP tested and approved.

JOB TRAINING AT HOME

You get Professional Tools, Precision Instruments, PLUS a Factory-Made APPLIANCE TESTER! A shop-full of *PRACTICAL*, professional equipment. Use them to conduct over 100 experiments...also in Spare Time Work and ON THE JOB. It is all yours to keep... no EXTRA MONEY DEPOSITS...no EXTRA COST on your equipment kits.

EARN AS YOU LEARN

We show you how. Many of our students pay for their entire course—and more—in Spare Time while learning. So can you. Graduate Advisory Service, too.

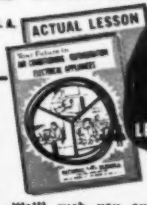
GET THE BENEFIT OF OUR OVER 50 YEARS EXPERIENCE

N.T.S. also offers training in TV — RADIO — ELECTRONICS and AUTO MECHANICS — DIESEL

RESIDENT TRAINING AT LOS ANGELES

If you wish to take your training in our Resident School at Los Angeles, start NOW in our big modern Shops and Labs. Here you work with latest equipment, professionally installed... finest, most complete facilities offered by any school. Expert, friendly instructors. Personal attention. Graduate Advisory Service. Help in finding home near school, and part time job while you learn. Check box in coupon for full information.

ACTUAL LESSON



SEND FOR FREE BOOK AND ACTUAL LESSON NOW!

We'll rush you our big, illustrated OPPORTUNITY BOOK and ACTUAL LESSON, show you how easily you can learn. NO OBLIGATION; no salesman will call. Do it NOW! It costs nothing to find out.

NATIONAL TECHNICAL SCHOOLS

WORLD-WIDE TRAINING SINCE 1905

MAIL NOW TO
National Technical Schools, Dept. CA-39
4000 S. Figueroa St., Los Angeles 37, Calif.

Rush FREE "Opportunity" Book and Actual Lesson. No Salesman will call.

NAME _____ AGE _____

ADDRESS _____

CITY _____ ZONE ____ STATE _____

☐ Check here if interested ONLY in Resident Training at Los Angeles

ABSOLUTELY FREE!

IN JUST 15 MINUTES I'LL PROVE I CAN GIVE YOU A VIRILE, RUGGED,

HE-MAN BODY!

In just 15 minutes, right in the privacy of your own room, through my TRIPLE-PROGRESSIVE COURSE, I'll slap **pounds of steel-like muscles** all over your body. I'll add 4 inches of **power-packed muscles** to your chest — another 3 inches of **steel-packed muscles** to your arms — I'll give you **lifeguard shoulders** and **speedy, athletic legs.** I'll also build inner strength and give you that **virile look** that men envy and women admire. LET ME PROVE AT MY OWN EXPENSE THAT EVERYTHING I SAY CAN BE DONE!

Send me this coupon and I will rush you my GIANT 48-PAGE COURSE that teaches you privately how you can become a real HE-MAN. DON'T MISS THIS ONCE-IN-A-LIFETIME OPPORTUNITY.

JOE WEIDER Dept. 40-39W
"Trainer of the Champions"
803 Palisade Avenue
Union City, New Jersey
Dear Joe:
Rush me my FREE POWER-PACKED MUSCLE COURSE. I am under no obligation, and I enclose 10¢ to cover handling and postage charges.

AMAZING FREE TRIAL OFFER

Name .....
Address .....
City..... State..... Age.....

$1 BRINGS YOU $18

Discover Flok-Kraft and Earn $$$$$ AT HOME

Earn up to $15.00 per hour spare time. Amazing new Velvet-fiber spray instantly makes any object (Lamps, Radio & TV Cabinets, Figurines, Signs, Auto dash boards, toys, furniture, draperies—anything) worth expensive $$$$$ Prices . . . like magic, you can spray anything with this beautiful new suede-like finish that feels like rich Velvet.

EARN UP TO $300.00 PER WEEK SPARE TIME

Imagine, materials cost only 3c per square foot. (Average TV or radio cabinet can be beautifully sprayed with this startling new 3-dimensional Velvet finish in 15 minutes at a cost of only 34c in materials. Your charge for this job is at least $10.50.)

REPRESENTATIVES IN YOUR AREA URGENTLY NEEDED

Own your own business. Work at home in your spare time. Help fill the huge growing demand for this amazing new beautiful Velvet-fiber finish. Orders come from stores, offices, homes, architects, auto dealers.—everywhere. Possible $20,000,000.00 worth of jobs to be done. Investigate today—be first in your area!

Actual samples in 16 Radiant Colors, Booklet of 50 Home Business Opportunities and Confidential Details all sent free! Send no money. Write: Coast Industries, Los Angeles 61, Calif., Dept. M-3.

$1.00

EXACT REPLICA U. S. MARINE GRENADE

As Used in Hand Combat

Get a real bang when you toss this replica of a Marine grenade. Startle ex-G.I.'s. Explodes automatically 4-seconds after pulling pin as it strikes ground. Can't break. Heavy gauge steel firing mechanism. Uses standard caps. Can be exploded over and over. Real collector's item. Comes complete with instructions. Send $1.00 plus 25¢ shipping charge—cash, check or money order to: Standard American Suppliers, Inc. Grenade Dept. MI-2. One Park Ave., New York 16, N. Y.

EARN WHILE YOU LEARN

SEND FOR FREE BOOKLET

Be a LOCKSMITH

Learn fascinating, profitable trade from experts in spare time at home! Age no disadvantage. Year 'round, steady income. Full or part time. Practical, illustrated lessons. Make money even while learning! All materials and special tools supplied.

LOCKSMITHING INSTITUTE, Dept. 303-9
150 Park Ave. East Rutherford, N. J.
Lic. by N. J. State Board of Ed. Apprvd. for Vets

BATTERIES!—START

—a battery factory at home—and Re-cast junk batteries into new; Latest achievement. We supply complete instructions and everything needed. Large daily profits!

BATTERY LABORATORIES
So. Div. Dept. MI, Bayou La Batre, Ala.

Get into.. PLASTIC LAMINATING AT HOME!

THIS MAN . . . is taking out of the machine a Plastic Sealing Job — ordered by mail — only 1¢ in material cost brings back $2.58 in cash by mail. Capacity of machine: $25.00 profit per hour of operation.

Get ORDERS and CASH from your mailman—do work in SPARE TIME at home —or expand into FULL TIME business.

Send coupon for Free facts about the newest and most fascinating of all home operated businesses. For the first time a simplified machine brings the fabulous profits of **Plastic Sealing** and **Plastic Laminating** within the reach of the small operator. Anyone can learn to operate the machine with a few minutes practice—then with our **Magic Mail Plan** can get mail orders pouring in daily with cash in every envelope. ***No canvassing—no selling.*** We even supply the circulars you mail to bring back cash and orders. Don't waste a minute. Rush your name. We'll send you FREE and postpaid, pictures, prices, details, and all the facts you need to start. Mail coupon or send name on postcard. No charge.

Make up to $5 an Hour.. MAGIC MAIL PLAN!

Warner Electric Co., 1512 Jarvis Av., Dept. L-4-C, Chicago 26, Ill.

Make Thousands of Beautiful Art Creations

COSTUME JEWELRY • CIGARETTE BOXES
TRAYS • CANDLESTICKS • COASTERS
LAMP BASES • BOOK ENDS...ALL IN SPARKLING COLORED PLASTIC

WARNER ELECTRIC CO., 1512 Jarvis Av.
Dept. L-4-C, Chicago 26, Ill.
At no cost to me, please rush complete details postage prepaid. I am under no obligation.

*Name*_____
*Address*_____
*City*_____ *Zone*____ *State*_____

BUY DIRECT FROM DISTRIBUTOR — SAVE UP TO 75%

Brand New Gov't Surplus DUPONT NYLON CORDS

Below Manufacturers' Cost! Outwears Ordinary Rope 10 to 1

Light, strong, durable, quick-drying. Will not rot or mildew. Ideal for indoor or outdoor use. Camping, boating, hunting, clothes line and venetian blinds. Perfect for tent ropes, light anchors, deer cord, trot lines, crabbing, etc.

NYLON BRAIDED CORD

1/16" dia., 100 lb. test, per ft. ..... 1½¢
1/8" dia., 375 lb. test, per ft. ..... 2¢
3/16" dia., 500 lb. test, per ft. ..... 2½¢
In 50, 100, 200, 300, 400, 500 ft. & over lengths

NYLON BRAIDED LINE

¼" dia., 1000 lb. test, olive drab, per ft. ..... 3¢
In 30, 40, 50 ft. lengths

NYLON ROPE

¼" dia., 1200 lb. test, per ft. ..... 7¢
⅜" dia., 2700 lb. test, per ft. ..... 16¢
7/16" dia., 3800 lb. test, per ft. ..... 19¢
All in any length up to 1200 ft.

NYLON FISH LINE

Proven best by experienced fishermen. Heat stretched. Will not kink, twist or unravel. 25 lb. test, 300 ft. Reg. $1. per spool... 50¢

NYLON WEB STRAPS with sturdy steel buckle

Perfect for passenger safety belts, luggage straps, car tow-lines, car carrying straps, boat trailer straps, etc. Tie heavy equipment and machinery with greater ease and safety . . . at far less cost. Just the thing for the garage or workshop.

1" wide, 3,000 lb. test, per foot ..... 10¢
1½" wide, 6,000 lb. test, per foot ..... 16¢
In 5, 6, 8, 10, 12 foot lengths.

75c ea. for Finest Imported PRECISION PLIERS!

• Flat Nose • Combination • Diagonal Cutter • End Cutting Nippers • Round Nose • One Side Flat—One Side Round • Snips

FOR JEWELERS, OPTICAL WORKERS, HOBBYISTS, CRAFTSMEN OF ALL KINDS! These superb European instruments are of deep-forged, heat-treated high quality tool steel, fabricated to most exacting specifications, all-over ground and polished to smooth hard surfaces. Smooth working joints with just the right tension. Jaws meet perfectly to safely and securely hold even the most delicate objects in the hard-to-reach corners and angles. Each plier is 4" long and a veritable gem of precision and strength.

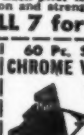
75c each . . . ALL 7 for $5.00 ppd.

CHROME VANADIUM 29 Pc. DRILL SET

Specially made for speed drilling; in sturdy plastic tool roll. Finest alloy steel drills hardened and precision ground to the sharpest, longest lasting cutting edge obtainable; will easily and cleanly bite through hardwoods, plastics, aluminum, iron and the toughest steels. Unconditionally guaranteed for thousands of drillings. Full Jobber lengths. Sizes by 64ths from 1/16" to ½". NOW . . . $6.49 ppd.

Also available with Turned Down Shanks to fit all ¼" drills. In individual pocket roll ..... $8.95 ppd.

60 Pc. Set Wire Gauge CHROME VANADIUM DRILLS



Top quality German import high test Chrome Vanadium Drills designed for speed drilling through toughest steels, woods, plastics, brass and aluminum. Precision ground, long-lasting cutting edges. Guaranteed to give years of satisfaction. A full 60 pc. set. Nos. 1 through 60. A $14.95 value—NOW ONLY $5.40
PLUS 35c FP. & HDLG.

Same set above available with Metal Index container. $6.65
PLUS 35c FP. & HDLG.

Also Available
20 Pc. Set — Nos. 61-80
WIRE GAUGE DRILLS
In plastic kit with marked pocket for $2.50 ppd.

SANDING PROBLEMS SOLVED *FOREVER* WITH Dura-Grit Tungsten Carbide Sanding Accessories!

The Miracle Abrasive That is Harder THAN ANY KNOWN STEEL! The amazing discovery of brazing tough tungsten carbide grits to steel creates a diamond-like cutting hardness—makes possible the finest sanding equipment ever known. Each grit becomes a sanding edge that performs perfectly—stays keen and sharp indefinitely—never needs replacing—makes sandpaper obsolete! Excellent for use on all WOODS, PLASTICS, PLASTER, WALLBOARD and all COMPOSITION MATERIALS! Saves twice as fast as sandpaper—never tears! Saves time and torn hands because you never need to change—Discs, Sheets and Wheels are all LIFETIME GUARANTEED!

LIFETIME HANDY SANDER

With 2 sanding sheets (1 for Coarse and 1 for Fine Sanding). The hand-sanding block that does away with the nuisance of sandpaper forever. A guaranteed smooth, satin-like finish every time! PRICE $2.00

5-in-1 WHEEL

It Saws • It Shapes • It Ploughs • It Sands • It Dadoes

Performs five separate operations: saws, shapes, ploughs, sands and dadoes. It can cut and sand in the same operation . . . there's no teeth to drag, bind or gouge and eliminates dangerous "kick-back". The perfect accessory for both table and radial saw use. 80 grit on one side; 36 grit on edge and other side. Never needs sharpening . . . lasts for years.

6½" Wheel ½" Arbor With Bushing To Reduce To ⅜" Arbor. $6.95 + 25c pp. & hdlg.

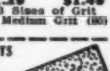
8" Wheels ⅝" Arbor With Bushing to reduce to ½" Arbor. $7.95 + 25c pp. & hdlg.

SANDING DISCS

For Use With All Standard Power Drills Converts portable electric power drills to efficient sanding machines. Does away with sandpaper forever—no longer will the nuisance of tearing sandpaper delay the work. Ideal for use by the handyman as well as the professional carpenter. Save effort . . . time . . . and dollars!

4" DISC $1.00 — 5" DISC $1.29 — 6" DISC $1.49
Available in 3 Sizes of Grit: Fine Grit (150) Medium Grit (80) Coarse Grit (60)

SANDING SHEETS

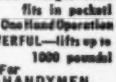


3⅝ x 9 in.
For Use With All Standard Oscillating And Orbital Type Sanders. Complete the most difficult sanding job in a fraction of the time it takes with sandpaper—eliminates forever the nuisance of stopping to change torn and worn-out sandpaper. Even the amateur handyman achieves a beautifully sanded job every time . . . and it's an indispensable need for the professional carpenter. Available in 3 Sizes of Grit..... $1.49
Fine Grit (150) Medium Grit (80) Coarse Grit (60)

"Hoppy" SPLIT-IMAGE TRANSIT

One Of The Most Revolutionary LEVELS & INCLINE MEASURERS ever made! This simple yet amazingly accurate instrument indicates level and measures inclines down to a fraction of an inch. Makes bubble type or string levels obsolete. It not only indicates level, but shows exactly how much correction is needed. Just one person, using the split-image transit and target supplied with it, can perform any leveling, incline-measuring quickly, easily, accurately—measures inclines down to the thinness of a dime at 25 feet. So accurate, it can be used instead of expensive surveying equipment for most grading and construction work. IDEAL FOR—Leveling & Grading Model Train Tables, Contour Plowing, Carpentry, Brick Laying, Cement Work, Surveying, Guttering, Foundation Work, etc. $6.95 ppd.

AMAZING BLOCK & TACKLE



• PORTABLE—weighs 13 ozs. fits in pocket!
• One Hand Operation
• POWERFUL—lifts up to 1000 pounds!

For
• HUNTERS • HANDYMEN
• FARMERS • TRUCK DRIVERS
• YACHTSMEN • MOTORISTS

The great strength, small size, complete portability of the Midget Babe Block & Tackle gives it many uses. In car, home, factory, farm. For sportsmen: loading deer, boats, etc. For lifting heavy articles anywhere! Best grade aluminum. Steel axles. Lubricated for life! Two lifting slings, top and bottom. Heavy welded steel rings. Slings can be doubled for extra strength. With 50 ft. nylon cord, 5-1 ratio, 1000 lb. test. $9.95
Carrying bag, instructions, 1 yr. guarantee.
Also available—Tiny Babe: Lifts up to 2000 lbs.! With 100 ft. nylon cord, 7-1 ratio, 2000 lb. test, 18 oz. wgt. $12.95
Twice as powerful as $9.95 model, only ..... ppd.

INTERESTING-EDUCATIONAL-EASY-TO-BUILD

PORTABLE TRANSITOR RADIO KIT

Complete—Nothing Else to Buy—No Soldering—Screwdriver Only Tool Needed

Here's a challenge and an opportunity for every youngster to build a quality, portable transistor radio that is guaranteed to give amazingly clear reception even from distant stations. This is not an ordinary "crystal set" but a carefully engineered unit utilizing the Germanium Diode developed for radar plus the Transistor for superior amplification of sound.

A screwdriver is the only tool needed. It's simple to follow the step-by-step assembly instructions. The kit contains all necessary components plus a "Trans-Assembly Template." Gift boxed. You'll be wise to buy several. • Penlite Batteries—Last 1000 hours • Simple to Assemble • Personal Portable Radio with Case • Complete with Professional Earphone • Guaranteed to Operate ..... $7.95 ppd.

QUICKFIT CONTOUR MARKER

Amazing New Tool for Making Patterns to Fit Any Irregular Shape!

A real boon to all Mechanics, Carpenters, Linoleum Layers and Do-It-Yourselfers! This handy new tool gives measurements of hard to fit contours in an instant. Saves hours of time—assures perfect work without waste. Simply lay "Quickfit" against object to be fitted, push the sliding levers into each groove or notch, snap lock—and presto, you have a perfect template to lay out your work. There are 19 solid 18"-time aluminum "fingers" per inch—over-all size 10"x ½"x ⅜". ..... $5.59 ppd.

Drills and Saws Any Shape! SUPREME HOLESAW

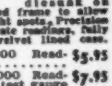
Simply insert the amazing Holesaw into the chuck of your ¼" electric drill and you're ready to cut any shape you desire. Lower portion of Holesaw acts as regular ¼" drill which easily bores thru wood plaster, plastics, plywood and similar materials. Then, after penetration, the multiple keen cutting edges of the Holesaw, cleanly and speedily cut in any direction you move. Cut circles, triangles, zig-zags, any conceivable shape you wish—in seconds! $1.00

AUTOMATIC SIPHON PUMP

sensational low price $1.98 ppd.

Now—siphon any liquid automatically, safely, WITHOUT putting tube to mouth! Squeeze bulb, liquid starts to flow immediately! Transparent sections let you see liquid flowing! Siphons, pumps gasoline, water, any liquid. Even acids, corrosives! For cars, boats, power mowers, campers, plumbers, doctors, chemists, factories! Acid resistant. Over 7 ft. long! ALSO AVAILABLE—Heavy Duty Siphon, ½" diameter tubing, 8 ft. long 2.98 ppd.

Precision Micrometers AT BARGAIN PRICES!



Chrome plated, adjustable equipped with ratchet stop and lock nut. Adjustable for zero. Decimal equivalents of fractional sizes clearly on frame. Recessed frame to allow readings in tight spots. Precision made for accurate readings. Fully polished. In velvet lined case.

0-1", 1/1,000 Readings $5.95
1-2", 1/10,000 Readings with 1" test gauge $7.95
0-1", 1/10,000 Readings with 1" test gauge $7.50
1-2", 1/10,000 Readings with 1" test gauge $9.50

Full Range—Doz. 1-12
Quality Camel Hair Brushes

For Artists, Hobbyists, Homeowners

Superb quality brushes for every conceivable need from fine line work to broad brush strokes. You'll be amazed at the soft yet firm texture of these select brushes, each solidly set in metal grip to give years of use. Perfect for artwork, architects, touching up around the house, cleaning electrical and optical instruments and guns.

24 BRUSHES—2 ea. of Nos. 1 thru 12— $2.00 ppd.

Send Check or Money Order. If COD, fees extra.
MONEY BACK GUARANTEE

SCOTT MITCHELL HOUSE, INC.
Dept. G-3 415 So. Broadway, Yonkers, N.Y.

YOU can acquire

LAW AT HOME! EARN LL. B. DEGREE

LaSalle's famous Law Library—used as reference in many Law libraries and Law offices—has enabled thousands to master Law surprisingly fast, in spare hours at home, for business and professional advancement.

These 14 remarkable volumes, compiled by leading professors and lawyers, cover the whole basic field of Law in condensed, orderly, simplified manner.

You advance rapidly with this great library, plus special lectures furnished. We guide you step-by-step with personalized Problem Method of instruction...you *learn by doing*—handling legal problems—not by memorizing rules.

Send for two FREE booklets, "Law Training for Leadership," and "Evidence," answering questions about Law and its value to you. Mail coupon below. No obligation.

Accredited member, National Home Study Council

LA SALLE EXTENSION UNIVERSITY
A Correspondence Institution

417 S. Dearborn St. Dept. 3493L Chicago 5, Ill.

Send me your two FREE booklets described above, without obligation

Name.....*Age*.....

Street.....

City, Zone & State.....

LEARN UPHOLSTERY

in your spare time

run your own business AT HOME

BE YOUR OWN BOSS

Earn more from the start while learning AT HOME. Set up your own profitable business at home, enjoy steady income, independence. You're in demand in good times and bad in the booming field of Custom Furniture Upholstery.

EARN WHILE YOU LEARN ... the easy UTS way

Right off, you start with tools, complete frames, fabrics, materials, included FREE with your UTS course. You earn as you learn skilled professional custom upholstery, reupholstery, furniture finishing, repairs; to make slip covers, window cornices, cushions, draperies in your spare time at home.

Send for FREE Illustrated Book, Sample Lesson

Get ready for well-paid job, steady work and big profits as your own boss. Also Training in N.Y. School. APPROVED FOR VETERAN TRAINING.

MAIL COUPON TODAY. No obligation.

UPHOLSTERY TRADES SCHOOL, Dept. HC-1510
731 Broadway, New York 3, New York

Please send me FREE book with FREE Sample Lesson. No obligation—no salesman will call.

☐ Home Study ☐ Training In N.Y. School

Name .....
(Please print plainly)

Address .....

City..... Zone..... State.....

☐ Check if Korean Veteran

U-MAK-IT BOAT KITS AND FRAME KITS

FIRST AND OLDEST KIT BOAT MANUFACTURER

Most complete line of PRAMS, ROWBOATS, OUTBOARDS, CABIN CRUISERS and new Lapstrake kits.

Send for BIG New ILLUS. CATALOG Showing all models 8' to 23' BOAT KITS, FRAME KITS, LAPSTRAKE KITS, FIBERGLAS, Accessories, Paints, all you need to build your own.

MAIL 50c (coin) for Postage & Hdlg.

U-MAK-IT PRODUCTS
DELAND, FLA.— DEPT. 14

REDUCED PRICES • SAVE UP TO 25%

SUPER JU JITSU

Now get tough double quick!

A course of instruction in the art of practicing and using this method of applying LIGHTNING-QUICK Super Ju Jitsu, the Dangerous! These amazing lessons show you how it's done . . . in a big illustrated home-study course. The weapons are just your BARE HANDS—they can be used effectively if you know how and practice the art. Easy to learn; quick. Full 76-lesson course only $5.95 postpaid—or COD, plus postage. Satisfaction or your money back guaranteed! Order "super Ju Jitsu Course."

NELSON-HALL CO., 210 S. Clinton, Dept. SCR-3, Chicago 6, Ill.

MEN WANTED

Earn $100 Per Week and up

AUTO DIESEL MECHANICS

Master a trade with a future—learn Auto-Diesel mechanics in our shops. You learn with tools on real equipment. Earn while you learn. Many of our graduates earn $100 per week and up. No previous experience necessary. Day and night courses. Approved for veterans. Write for free bulletin.

NASHVILLE AUTO-DIESEL COLLEGE
226 7th Ave., N., Dept. 50 Nashville 3, Tenn.

GOVERNMENT OIL LEASES LOW AS $1 PER ACRE

You do no drilling, pay no taxes, may realize a king-size profit without ever leaving home. Free map and booklet. Write to

AMERICAN OIL SCOUTS, Dept. MI
8350 Santa Monica Blvd. Los Angeles 46, Calif.

MASS PRODUCTION MAKES THESE PRICES POSSIBLE!

Only world's largest boat kit maker can deliver such quality at such prices! Write for free color catalog, kits from $42.00, frt. inc.

12 ft. runabout $99.50 frt. inc.

FREE COLOR CATALOG!

TAFT MARINE WOODCRAFT
Dept. MI-359 636 39th Ave N.E. Minneapolis 21, Minn.

Better Than Your Own

SHOE STORE AT HOME

No investment, no experience needed. Just show magic cushion comfort to friends, neighbors, co-workers. Advance commissions to $4.00 a pair, plus Cash Bonus, Paid Vacation, $25.00 Reward Offer. Outstanding values for men, women, children. Money back guarantee. Shoe samples supplied without cost. Write TODAY for FREE new 84 page catalog and full details.

Two-Eyelet Hit With Cushioned Comfort

TANNERS SHOE CO., 114 BROCKTON, MASS.

WHAT ALL AUTO MECHANICS WANT TO KNOW

This Big Practical Book gives full information, with working diagrams, concerning the design, construction, ignition, service and repair of modern cars, trucks and buses.

Diesel Engines, Hydromatic and Fluid Drives Fully Explained.

A complete guide of 1696 Pages, with over 1500 Illustrations showing inside views of working parts, with instructions for service jobs. Completely up-to-the-minute! Priced at only $6.

CIRCLE No. 1 IN COUPON

HOW TO FIX HOME APPLIANCES

REFRIGERATORS WASHERS — TOASTERS DRYERS — IRONERS RANGES — VACUUMS FREEZERS

Many other GAS AND ELECTRIC APPLIANCES

Handy Reference for Electric & Gas Servicemen, Mechanics, Dealers and Homeowners. Explains clearly and simply how to locate troubles, how to test, recondition and connect. Wiring diagrams. 1000 Facts. Easy to read. Answers ALL your questions. 864 Pages. Illustrated. Only $6.

CIRCLE No. 2 IN COUPON

TV RADIO SERVICE LIBRARY

TELLS HOW TO ANSWER RADIO T.V. QUESTIONS

HERE IS LATE INFORMATION IN A HANDY FORM FOR RADIO AND TELEVISION REPAIRMEN, SERVICEMEN AND STUDENTS

TWO COMPLETE VOLUMES—1568 Pages—1085 Illustrations and Diagrams. 1001 Important Facts and Figures on Modern T.V., Radio, Electronic Devices. INCLUDES TRANSISTORS & Transistors Circuits, Rectifiers, Record Changers, P.A. Systems, Phonograph Pick-ups, F.M., Auto Radio, Short Wave.

Basic principles, Construction, Installation, Operation, Repairs, Trouble Shooting. How to get Sharp, Clear T.V. Pictures. Install Aerials, How to Test. Explains COLOR SYSTEMS, Methods of Conversion, Terms, etc. Includes Ultra High Frequency. Quick ready reference or use as a home study course. Only $8 for BOTH volumes.

CIRCLE No. 3 IN COUPON

KNOW YOUR TRUCK

The TRUCK & TRACTOR GUIDE for Mechanics & Drivers, Foremen, Garagemen, Helpers, Owners, Trouble Shooters, Farmers, etc. Covering Gas & Diesel Motor Principles — Construction — Operation — Maintenance — Repair — Brakes — Service of all Parts. 1376 Pages. FULLY ILLUSTRATED. Index. Only $5.

CIRCLE No. 5 IN COUPON

PLUMBERS AND STEAMFITTERS GUIDES

Practical Trade Assistant & Reference Set. Explains in plain language and by clear illustrations, diagrams, charts, graphs and pictures the principles and modern plumbing practice including Pipe Fitting and Air Conditioning. 4 Vols.—2634 Pages—5642 Diagrams & Illustrations. Only $8 for the complete set of 4 vols.

CIRCLE No. 6 IN COUPON

PAINTING & DECORATING MANUAL

Inside Trade information on outside and inside work, how to mix paints, preparation of surfaces, paper hanging, wood finishes, tools, synthetic paints, color (with color chart), spray equipment, costs, estimating, etc. A COMPLETE guide to easier, better painting and decorating. 444 Pages. Fully Illustrated. Only $2.

CIRCLE No. 7 IN COUPON

7-DAY FREE EXAMINATION

SEND NO MONEY—Pay the postman nothing! We are glad to send you any of the Audel Guides for absolutely FREE examination in your own home. We take all the risks and have all the decisions up to YOU. There is no obligation! If you decide to keep the books of your choice you may pay for them under our astounding *easy-pay* plan of only $2 a month.

HERE IS ALL YOU DO

IT'S EASY TO ORDER: In the No-Risk Mail Order Coupon at the right just draw a circle around the number of Audel Guides you want us to send you for FREE EXAMINATION. We will send them to you at once to help you build a brighter future by increasing your SKILL. If for any reason at all you are not COMPLETELY satisfied, return the books to us, and that will end the matter! NO STRINGS OR CATCHES TO THIS OFFER.

THEO. AUDEL & CO.
49 West 23rd Street, New York 10, N. Y.

CARPENTERS AND BUILDERS GUIDES

PRACTICAL STOREHOUSE OF MODERN CONSTRUCTION INFORMATION (4 vol. set) for carpenters and all woodworkers. Explains in easy language and by practical illustration principles, advantages, short cuts, trade secrets, all based on the NEWEST information.

Vol. 1—Tools, steel square, saw filing, joinery, furniture, etc.; Vol. 2—Builders' mathematics, drawing plans, specifications, estimates, etc.; Vol. 3—House and roof framing, laying out, foundations, etc.; Vol. 4—Doors, windows, stair building, millwork, painting, etc. 4 vols. 1904 Pages. 3700 Illustrations. Whole set only $6.

CIRCLE No. 8 IN COUPON

PRACTICAL ELECTRICITY

A COMPLETE HANDBOOK—Quick, simplified, ready reference. Complete instruction and practical information on the rules and laws of electricity—Maintenance of Machinery—A.C. and D.C. Motors—Armatures—Wiring Diagrams—House Lighting—Power Wiring—Meters—Batteries—Transformers—etc. Simple to understand. 1520 Pages. 2600 Illustrations. Priced at $5.

CIRCLE No. 4 IN COUPON

DIESEL

ALL THERE IS TO KNOW ABOUT MODERN DIESEL ENGINES—Basic principles, starting valves, timing, fuel pumps, fuel injection, compressors, air compressors, pistons, cylinders, lubrication, cooling systems, etc. Answers on operation, calculations. 640 Pages. Fully Illustrated. Priced $3.

CIRCLE No. 9 IN COUPON

WELDERS GUIDE

—Covers Electric, Oxy-acetylene, Thermit, Unionmelt welding for sheet metal, spot and pipe welds, pressure vessels and aluminum, copper, brass and other metals. Airplane work, surface hardening, hard facing, cutting, brazing, etc. 608 Pages. Fully Illustrated. Only $3.

CIRCLE No. 10 IN COUPON

MATHEMATICS MADE EASY

A COMPLETE HOME STUDY COURSE—Starting with the first principles of arithmetic, advancing step by step through the various stages of mathematics, including the rules and calculations for mechanical and electrical problems. Now EASY correct methods. Includes plane and solid geometry, trigonometry, algebra, calculus, etc. Practical tests, reference tables and data. How to use slide rule. 752 Pages. 550 Illustrations. Priced at only $3.

CIRCLE No. 11 IN COUPON

NEW MACHINISTS AND TOOLMAKERS HANDBOOK

MODERN MACHINE SHOP PRACTICE—5 PRACTICAL BOOKS IN ONE. New from cover to cover. Tells how to set up and operate lathes, screw and milling machines, shapers, drill presses and all other machine tools. A COMPLETE INSTRUCTOR AND REFERENCE BOOK. 1728 Pages. Fully Illustrated. Priced at only $6.

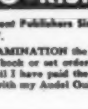
CIRCLE No. 12 IN COUPON

WIRING DIAGRAMS

This book gives the practical facts on wiring of electrical apparatus. It explains clearly and SIMPLY how to wire apparatus for all fields of electricity. Each diagram is complete and self-explaining. Know your HOOK-UPS! 304 Pages. Illustrated. Only $2.

CIRCLE No. 13 IN COUPON

REFRIGERATION & AIR CONDITIONING



FOUR BOOKS IN ONE—basic principles, servicing, operation, repair of: 1. Household Refrigerators. 2. Special Refrigeration Units. 3. Commercial & Industrial Refrigeration. 4. Air Conditioning Systems. A GOLD MINE of special information. Completely up-to-date. 1360 Pages. Fully Illustrated and Indexed. Priced at only $6.

CIRCLE No. 14 IN COUPON

THE NEW ELECTRIC LIBRARY

A COMPLETE ENCYCLOPEDIA explaining in the simplest terms the fundamental principles, rules and applications of applied electricity.

A COMPLETE COLLEGE EDUCATION!

Fully illustrated with diagrams and sketches, calculations and tables for ready reference. Questions and answers. Trial tests for practice study and review. All based on the most modern theory.

Vol. 1—Principles and rules of electricity, magnetism, armatures, repairs. No. 15

Vol. 2—Dynamos, DC Motors, construction, installation, maintenance, etc. No. 16

Vol. 3—Testing instruments and tests, storage battery constr. and repairs. No. 17

Vol. 4—Alternating current, power factor, alternators, transformers. No. 18

Vol. 5—A.C. Motors, windings, maintenance, converters, switches, fuses, etc. No. 19

Vol. 6—Relays, condensers, regulators, rectifiers, meters, switchboards, etc. No. 20

Vol. 7—Wiring, house light and power, circuits, high tension, plans, code, etc. No. 21

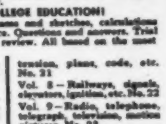
Vol. 8—Railways, signals, elevators, ignition, etc. No. 22

Vol. 9—Radio, telephone, telegraph, television, motion pictures. No. 23

Vol. 10—Refrigeration, illumination, welding, x-ray, electrical appliances. Index. No. 24

7,000 fully illustrated pages.

Priced at only $20 for the ENTIRE SET. Also sold individually for $3 each.



ALL TYPES OF BLUEPRINT READING

How to read scales, the standard symbols, detail and assembly prints, working drawings, short cuts, helps, hints and suggestions. THE MAN WHO CAN READ BLUEPRINTS IS IN LINE FOR A BETTER JOB. This book gives you the secret language, step by step in easy stages. 448 Pages, Very Fully Illustrated. Priced at $3.

CIRCLE No. 25 IN COUPON

MASONS & BUILDERS GUIDES

A PRACTICAL ILLUSTRATED 4 VOL. SET—Explaining in clear, simple language and practical illustrations, principles, advances, short cuts, trade secrets, based on modern practice—including how to figure and calculate various jobs. Vol. 1—Brick work, bricklaying, bonding, designs. Vol. 2—Brick foundations, arches, tile setting, estimating. Vol. 3—Concrete mixing, placing forms, reinforced stucco. Vol. 4—Plastering, stone masonry, steel construction, blueprints. 4 Vols. 1440 Pages. 2067 Illustrations. Complete Set only $8.

CIRCLE No. 26 IN COUPON

ELECTRIC MOTORS

THIS GUIDE covers the construction, hookups, control, maintenance and trouble shooting of all types of motors. Includes armature winding. Explains entire subject in great detail in simple language. Over 1056 Pages of information. 617 Diagrams. All types of motors fully illustrated and indexed for ready reference. Priced at only $5.

CIRCLE No. 27 IN COUPON

OIL BURNERS

New, complete, explaining in detail both domestic and industrial oil burners. Includes electrical hook-ups and wiring diagrams. Fully covers the theory, construction, installation, operation, testing, servicing and repair of all equipment. Indexed for ready reference. Pages 416 Pages. 320 Illustrations and Diagrams. Only $2.

CIRCLE No. 28 IN COUPON

ADDITIONAL IMPORTANT TITLES

The following Audel Guides are all the best in their fields, written in clear simple fashion, all lavishly illustrated. Circle the numbers wanted in the MAIL ORDER COUPON below. All books are sent for FREE EXAMINATION.

No. 29	SHEET METAL PATTERN LAYOUTS. 1182 Pages	$7.50
No. 30	SHEET METAL WORKERS HANDY BOOK. 448 Pages	2.00
No. 31	MECHANICAL DRAWING GUIDE. 192 Pages	2.00
No. 32	MECHANICAL DRAWING AND DESIGN. 480 Pages	3.00
No. 33	ELECTRONIC DEVICES. 384 Pages	2.00
No. 34	ELECTRICIANS EXAMINATIONS. 272 Pages	2.00
No. 35	ELECTRIC POWER CALCULATIONS. Page 480	3.00
No. 36	ELECTRIC DICTIONARY. 9000 Terms	3.00
No. 37	POWER PLANT ENGINEERS GUIDE. 1589 Pages	5.00
No. 38	ENGINEERS AND FIREMANS EXAMS. 544 Pages	2.00
No. 39	OPERATING ENGINEERS LIBRARY. 3 Book Set	12.00
No. 40	PUMPS, HYDRAULICS AND AIR COMPRESSORS. 1760 Pages	6.00
No. 41	HOUSE HEATING GUIDE. 1008 Pages	5.00

MAIL THIS NO-RISK COUPON TODAY!

THEO. AUDEL & CO.—Self Improvement Publishers Since 1879—
49 W. 23rd Street, New York 10, N. Y.

Please mail me for 7 days' FREE EXAMINATION the books I have circled at right. I agree to mail $2 in 7 days on each book or set ordered, and to further mail $2 a month on each book or set ordered until I have paid the purchase price, plus shipping costs. If I am not completely satisfied with my Audel Guides I may return them.

NAME _____

ADDRESS _____

OCCUPATION _____

M3	1	2	3	4	5	6
	7	8	9	10	11
	12	13	14	15	16
	17	18	19	20	21
	22	23	24	25	26
	27	28	29	30	31
	32	33	34	35	36
	37	38	39	40	41

☐ **SAVE SHIPPING COSTS!** Check here if you enclose complete payment with order. We pay postage charges. You have same return privilege.

Some make more, some less:

$1050

gross in single

MONTH

in my own business

F.E.DORAN reports:

Start your own business!

Here's YOUR chance to start a money-making, year 'round business of *your own* and make the success you've dreamed about.

G. R. Adcock took in $102 in one day. O. W. Hare landed a $750 hotel job. J. S. Corbit grossed $279.50 his first month. Homes, hotels, offices, clubs, offer you big profit possibilities. Auto upholstering also.

NO SHOP OR OFFICE NECESSARY • You clean furniture on customers' premises. No hauling, no high rents. Supplies inexpensive; you operate from your own home. What you take in is mostly profit.

If you want to be your own boss—free from lay-offs and strikes, we will help you to start and succeed. **This is not a lease proposition.** *You* own the machine, *you* work when and where *you* please and all the money *you* take in is *your own.*

Mail Coupon Today for FREE Book

VON SCHRADER MFG. CO.
312 "D" Pl., Racine, Wisconsin
Without obligation rush your **FREE** booklet about how I can start my own permanent, profitable electric Upholstery Cleaning business.

Name _____

Address _____

City _____ Zone ____ State _____

Made especially for mounting plastic table tops and bonding many dissimilar materials.

Send stamped, self-addressed envelope for Free copy of "Elmer's Guide To Good Gluing". Write The Borden Company, Dept. 3-F, 350 Madison Ave., New York 17, N. Y.

BORDEN'S PRODUCTS FOR THE HOME HANDYMAN

New Isotronic Training Method

LEARN TV REPAIR IN ONE SHORT WEEK!

Now, after 5 year's research—a streamlined training system that *obsoletes all others!* In just 7 days you may earn $150 weekly, without paying up to $250 for training, studying long months! Developed by electronic scientists *in cooperation with major* TV mfr's., the new Isotronic method is the most *practical* ever devised! For conclusive proof, write for details and FREE SAMPLE LESSON. Use it on your own set or a friend's – repair it – convince yourself you can make *big money immediately* in your own TV business! Hurry – Free Lesson supply limited. Write:
T. V. Servicing Systems, Dept. C-153
1038 So. La Brea, Los Angeles 19, Calif.

SPILL MONEY out of YOUR MAIL BOX!

NEW! IMPORT-Mail Order

PROFITUNITY – START AT HOME

Sell RARE EXOTIC IMPORTS

by MAIL ORDER Exclusively! No experience required, no face to face selling. We want a limited number of ambitious men and women to participate at home in a new, exclusive IMPORT MAIL ORDER Business proposition. We do all IMPORTING, furnish expertise literature, names, addresses, and fill orders for you. All you do is mail for us and receive money coming direct to your own mail box. Hurry, for Big Profits.

MAIL ORDER DISTRIBUTORS, Import Franchise Division: Dept. M-3,
15201 South Broadway — Los Angeles 61, Calif.

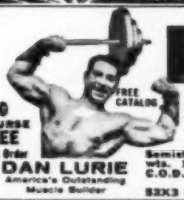
HYDRAULIC JACK REPAIRS

Earn While You Learn at Home

Millions of jacks in gas & auto-service stations, truckers, body-shops, riggers, factories, farms need servicing. We show you HOW—easy step by step directions—what tools to use. EARN UP TO $5 an hour, in spare time, in your own basement or garage. Start your own business NOW.

Write for folder No. MI-3 & free bonus offer

Institute of Hydraulic Jack Repair
P.O. Box 50, Bloomfield, N. J.



$10 COURSE FREE With Order

DAN LURIE
America's Outstanding Muscle Builder

ADD UP TO 25 POUNDS of SOLID MUSCLES BY YOUR BODY NOTHING

Only DAN LURIE BARBELLS and "Body Mold" courses produce such amazing results. 15 minutes a day can make you a bigger man. Send today for details. Order now at lowest factory price.

50 lb. set..$ 8.98 150 lb. set..$21.98
100 lb. set..$14.98 200 lb. set..$27.98

Semitool sets approx. 10% higher. Extra wts. 14c per lb. Send 50% cash, balance C.O.D. F.O.B. Plant.

DAN LURIE BARBELL CO.
52X3 Bristol St., Dept. 930C, Bklyn. 12, N.Y.

"How to Make Money with Simple Cartoons"

A book everyone who likes to draw should have. It is free; no obligation. Simply address FREE BOOK

CARTOONISTS' EXCHANGE
Dept. 353-D, Pleasant Hill, Ohio

WHAT IF YOUR FALSE TEETH BREAK?

Good News! Now you can repair them at home in 10 minutes. **$1.98 P. Pd.**

- NO EXPENSIVE REPAIR BILLS
- NO WAITING AT DENTAL OFFICES

Amazingly easy-PLATE-WELD repairs broken plates (clear or pink) and replaces teeth. Simply flow on broken edges and put together. So dependable this material used by dentists. Enough for many repairs. No special tools needed. Full instructions. Money back guarantee. Order PLATE-WELD now and get at no extra cost plate cleaner and polish. All 3 items sent day order received. Send $1.98 (no C.O.D.) to

HOME DENTAL AIDS
Box 1731 Dept. M-2 Bakersfield, Calif.

Dear Editor

[*Continued from page 22*]

I was very interested in your article Propeller-Driven Train by Frank Tinsley in your Dec. issue of MI. I had the privilege of inspecting a very similar type of train (the same principle except where in your illustration you show one propeller at the rear this model had propellers front and rear). A full-scale model with about one-third of a mile of track was built outside the city limits of Glasgow, Scotland, by a Scottish engineer—George Bennie, I think.

Alexander Graham
London, Ont.

• *January Mystery Solved*

Answer: Tom was 24, Betty was 21.

J. R. W.
Portland, Ore.

DON'T DO-ITS

FOR YOU BETTER PAY and a BRIGHTER FUTURE IN AUTO MECHANICS AND DIESEL

Your spare time pays off BIG with our world-famous SHOP TESTED Home Training

MAKE YOUR FUTURE AS BRIGHT AS THEIRS

In a matter of months, you can quit your no-future job for a big-pay, big-future career as an Auto-Diesel Mechanic. Free Illustrated Book gives you the facts. Send coupon below. No Obligation. No Salesman will call.

All Phase Training

N. T. S. students become skilled, all-around mechanics. Crystal-clear lessons, Shop-Tested manuals, real professional equipment, make it easy to learn. Big equipment kits, yours to keep. Earn as you learn...we show you how. Graduate Advisory Service.

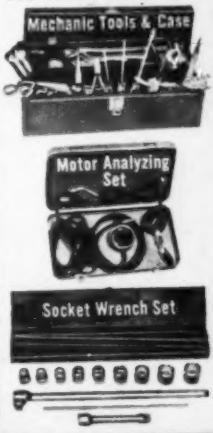
N.T.S. Training is Better, More Complete, Lower Cost BETTER...

Because training is SHOP-TESTED in Resident School Shops & Labs. MORE COMPLETE...You learn all phases of Auto Mechanics & Diesel. LOWER COST...One low tuition covers entire cost of course and all equipment.

Unlimited Opportunities

Trained mechanics make top money...are in demand at dealer shops, garages, large bus and truck lines, construction projects, government labs, factories, and many others.

YOU GET AND KEEP ALL THIS PROFESSIONAL EQUIPMENT



NATIONAL TECHNICAL SCHOOLS
WORLD-WIDE TRAINING SINCE 1905
4000 SO. FIGUEROA ST., LOS ANGELES 37, CALIF., U.S.A.

FREE! Illustrated Fact Book & Actual Lesson

Mail coupon now.

RESIDENT TRAINING at Los Angeles!
If you wish to take Resident Training at Los Angeles, in our Big, Modern Shops & Labs, check special box in coupon for full information.

Complete TV-Radio Electronics training also available.

NATIONAL TECHNICAL SCHOOLS
WORLD-WIDE TRAINING SINCE 1905

Member

MAIL NOW TO
NATIONAL TECHNICAL SCHOOLS, Dept. BA-39
4000 S. FIGUEROA ST., LOS ANGELES 37, CALIF.
Send for FREE Auto-Diesel Opportunity Book and actual Lesson.

NAME _____ AGE _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____
☐ Check if interested ONLY in Resident School training at Los Angeles.
VETERANS: Give date of Discharge _____

Not everyone does as well, but T. N. CODY, who started a business of his own, reports...

For 12 months I've averaged

$800

per month income

—most of it clear profit for me!

Many men have discovered how to be independent, to be free of layoffs and bosses. C. G. Naples grossed more than $200 his first week. A father-son combination grossed $44,000 their second year. H. Lemon says, "*I netted $133 in one 8-hour day.*"

How much you make depends largely on you. You need no special skill, no large investment. Start part time if you wish.

NO SHOP NECESSARY • Our Electric Deterger shampoos rugs, carpets right on floor—removes dirt and grime and helps to show their natural color and beauty. So efficient and safe it is used by largest railroads and hotels.

This is not a lease proposition. You own the machine, you work when and where you please and all the money you take in is *your own*. No risk. Machines fully guaranteed.

Mail Coupon Today for FREE Book

VON SCHRADER MFG. CO.,
312 "R" Pl., Racine, Wis.
Without obligation send me **FREE** booklet about your RUG DETERGER and tell me how I can start *my own* permanent, profitable business.

Name_____

Address_____

City_____ Zone____ State_____

BE YOUR OWN BOSS

Earn $5,000.00 to $15,000.00 a Year

OWN A tastee-freez STORE

1. Take advantage of Drive-In boom.
2. Large earnings. No experience required.
3. If you own a lot we will help finance construction.
4. If you have no lot we have locations available.
5. As little as $2500.00 cash required.
6. Nationally advertised and supervised.
7. Present chain over 2,000 stores.
8. Sell Tastee-Freez, hamburgers, hot dogs.
9. Stores designed for either 8 months or year 'round operation. *Information FREE*

Write **HARLEE MFG. CO.**
2518 W. Montrose, Dept. 18 • Chicago 18, Ill.

PEEL OFF PAINT

- Remove old finishes easier, faster
- Non-inflammable and needs no afterwash
- For wash-off or scrape-off use

Heavy-Bodied KLEAN-STRIP
PAINT REMOVER
THE KLEAN-STRIP CO., INC.
2340 S. Lauderdale, Memphis 6, Tenn.

HOW TO GROW
ORCHIDS
AT HOME

"Most enjoyable hobby I have. People drove 100 miles to see this plant ...10 flowers 8½ inches across." MRS. ERNEST, Utah

Learn Special Conditions of Light, Temperature & Humidity Needed!

WORLD'S MOST THRILLING HOBBY - PROFITABLE HOME BUSINESS. SUCCESSFUL HOME GROWER offers COMPLETE illustrated instructions. Tells HOW TO START. Explains everything you need to know about growing Cattleyas, Cymbidiums, Odontoglossums and others. Many Orchids GROW WITHOUT SOIL, get food from the air. Instructions include real BLOOMING-SIZE ORCHID PLANT. FREE - full details and 3-months Subscription to the "Orchidian," the "show-how" publication for home Orchid growers. WRITE TODAY!! Airmail reaches us overnight.

FREE! 3-months Subscription to the "Orchidian"

TROPICAL FLOWERLAND, Dept. 43, 1005 S. Vermont, Los Angeles 4, Cal.

119 JIG SAW PATTERNS

FULL-SIZE . . . trace on wood and saw out. Clever, ORIGINAL designs, things you can make to SELL. Wall shelves, lawn signs, planters, book ends, others. $1 postpaid

BURGESS VIBROCRAFTERS, INC.
Rush $1 today. DEPT. C-94, Grayslake, Illinois

FIND BURIED TREASURE

GOLD, silver, coins, jewelry, strongboxes, battle relics! M-SCOPE transistorized electronic Treasure-Metal Locators detect them all. Used world-wide. Exciting! Rewarding! Guaranteed. Lightweight, super-sensitive. Indestructible fiberglass cases. From $39.50, Easy Terms. FREE catalog.

FISHER RESEARCH LAB., INC.
Dept. MI-2, Palo Alto, Calif.

FIX OUTBOARD MOTORS

POWERMOWERS, AND ALL SMALL 2 & 4-CYCLE GASOLINE ENGINES

MAKE EXTRA MONEY—or, repair your own equipment and SAVE! Fully illustrated, easy-to-understand, Home Study Course. Write today for FREE information.

LINCOLN TECHNICAL INSTITUTE
SUITE 3-Q, 472 MARKET STREET, NEWARK 5, N. J.

8 Ft. SPECIALS-$1.25

FOR PARTIES AND FUN

FOR ADVERTISING

A special purchase makes it possible to offer these GIANT 8 FOOTERS at a fraction of their value. New, genuine neoprene govt. surplus. Great for advertising, you paint your message on 'em, inflate & fly. Attracts crowds to sales, displays, openings, stores, gas stations. Fun at home for young & old and just the thing for any party or school prom. Perfect for beach or picnic. They're BIG and they do a BIG job! Order yours today!

8'—$1.25 ea. . . (5 for $6.00)
13'—$1.95, 15'—$2.95, 18'—$3.95

Postage pd. on ppd orders. Calif. res. add sales tax.

FRANK SALES, Dept. MI-359
3930 Sunset Blvd., Los Angeles 29, Calif.

UNUSUAL TELESCOPE BUYS

See the Stars, Moon, Planets Close Up!

3" ASTRONOMICAL REFLECTING TELESCOPE

60 to 160 Power—Famous Mt. Palomar Type! An Unusual Buy!

Assembled—Ready to use! You'll see the Rings of Saturn, the fascinating planet Mars, huge craters on the Moon, Star Clusters, Moons of Jupiter in detail. Galaxies! Equatorial mount with lock on both axes. Aluminized and overcoated 3" diameter high-speed f/10 mirror. Telescope comes equipped with a 60X eyepiece and a mounted Barlow Lens, giving you 60 to 160 power. Low-cost accessory eyepiece, available for higher powers. An Optical Finder Telescope, always so essential, is also included. Sturdy, hardwood, portable tripod. Valuable STAR CHART and 272-page "Handbook of Heavens."

Stock No. 85,050-B .....$29.95 postpaid

KNOW THE TRUTH about power. Telescope experts will confirm that an Astronomical Telescope will only give you practical powers to about 50 or 60 times per inch of objective diameter—powers above this only produce empty magnification—make viewing dim, difficult and unsatisfactory.

4¼" Reflecting Telescope—up to 270 Power

Stock No. 85-006-B .....$74.50 F.O.B. Barrington, N. J.

8 POWER ELBOW TELESCOPE—WAR SURPLUS

$200 Value — Only $13.50

Big 2" objective, focusing eyepiece 28mm focal length—Amici erecting system—turret mounted filters, clear, red, amber and neutral—reticle illumination. Sparkling, clear, bright image—6° field (325 ft. at 1,000 yds.). Focus adjusts 15 ft. to infinity. 28mm f.l. eyepiece alone is worth more than $12.50.

Stock No. 70,173-B .....$13.50 postpaid

WRITE FOR FREE CATALOG "B"!

Complete Line of Astronomical Telescope Parts and Assembled Telescopes. Also huge selection of lenses, prisms, war surplus optical instruments, parts and accessories. Telescopes, microscopes, Hand Spectroscopes, Sniperscopes, binoculars, etc. Request Catalog "B"!

EDMUND SCIENTIFIC CO., BARRINGTON, N. J.

SAVE 1/2 OR MORE

Build this six transistor portable radio

$29.95

No other portable gives you so many features at such a low price: 4" x 6" speaker, 500 to 1000 hr. battery life, two-tone molded plastic case, plus high quality, all-transistor circuit.

IT'S EASY, FUN, EDUCATIONAL

No special tools or skills required.
Clearly illustrated step-by-step instructions guarantee your success—and you learn about electronics the easy way—BY DOING!

SEND FOR FREE CATALOG

..... Describing nearly 100 other "do-it-yourself" HEATHKITS for hobby, hi-fi, ham radio or professional.

HEATH COMPANY
BENTON HARBOR 7, MICH.
pioneer in "do-it-yourself" electronics
a subsidiary of Daystrom, Inc.

name _____
address _____
city & state _____

free! ALLIED'S MONEY-SAVING 1959 ELECTRONIC SUPPLY CATALOG

452 value-packed pages

send for it!

SAVE ON EVERYTHING IN ELECTRONICS

EASY TERMS AVAILABLE

WORLD'S LARGEST STOCKS

Here is the complete guide to everything in Electronics for Experimenters, Builders, Amateurs, Servicemen, Engineers and Hi-Fi enthusiasts:

- Amazing Build-Your-Own KNIGHT-KITS
- Everything in STEREO Hi-Fi
- Hi-Fi Music Systems & Components
- Recorders & Phono Equipment
- Public Address & Paging Systems
- TV Tubes, Antennas, Accessories
- Amateur Station Equipment
- Latest Test & Lab Instruments
- Industrial Electronic Supplies
- Parts, Tubes, Transistors, Tools & Books

SAVE on everything in Electronics at ALLIED—get fast, dependable service, expert personal help, guaranteed satisfaction. Send today for your FREE 1959 ALLIED Catalog.

Everything in Electronics From One Reliable Source

OUR 38th YEAR

Send for FREE Catalog

ALLIED RADIO

ALLIED RADIO, CORP., Dept. 6-C9
100 N. Western Ave., Chicago 80, Ill.

☐ Rush FREE 1959 ALLIED 452-Page Catalog

Name _____

Address _____

City _____ *Zone* _____ *State* _____

Now 1/2 price!

SWISS ARMY Type 9-in-1 Knife

Formerly $1.98

88¢ plus 12¢ postage

★ Awl
★ File
★ Knife
★ Can Opener
★ Scissors
★ Corkscrew
★ Jackknife
★ Screwdriver
★ Bottle Opener

1958 Model

Korium Steel

Your Portable Work Shop

9 practical tools in one. Each separate; easy to open & close. No jamming or slipping. Rugged Korium steel. Bone handle. Metal ring. Replaces multitude of tools you can't find when needed. Fits pocket yet opens to almost 8 inches long! Keep in workshop, basement, kitchen, tool shop, car glove compartment. "Lifesaver" in emergencies! Thousands sold at $1.98—now SLASHED to only 88c plus 12c for postage & handling, while supply lasts. Rush $1 for prompt delivery. (Special: 3 for $2.75 postpaid.) Satisfaction guaranteed or money back. Sold only by mail, only by us, direct to you. MOTO-MATIC CO., Dept. 10-C-114, 585 Water Street, New York 2, N. Y.

HOME STUDY

can open the door to a BETTER JOB at BIGGER PAY for YOU

TODAY, CHOOSE YOUR CAREER! Then take the first easy step toward preparing for the goal you can reach *in spare time at home*. Or, if you are in work you like, learn how you can earn quicker promotions and bigger pay. For 62 years AMERICAN SCHOOL has helped many thousands of ambitious people succeed. Think seriously about the subjects listed. Fill in and mail coupon today.

AMERICAN SCHOOL, Dept. G328, Drexel at 58th, Chicago 37, Ill.
Without obligation, send FREE information on the subjects I have checked.

☐ Accounting
☐ Apprenticship Courses
☐ Architecture & Building
☐ Automotive Technician
☐ Better Foremanship
☐ Blueprint Reading
☐ Bookkeeping
☐ Business Management
☐ Civil Engineering
☐ Contracting
☐ Diesel Technician
☐ Drafting—Building Trades
☐ Drafting—Machine Trades
☐ Electrical Engineering
☐ Electricity—Practical
☐ Electronics—Industrial
☐ HIGH SCHOOL COURSES
☐ Machinists
☐ Mechanical Engineering
☐ Mechanical Technology
☐ Metalworking Courses
☐ Plumbing—Practical
☐ Private Secretary
☐ Retail Merchandising
☐ Salesmanship—Outside
☐ Sheet Metal Work
☐ Tool Making

NAME _____ OCCUPATION _____
HOME ADDRESS _____ AGE _____
CITY _____ STATE _____

Accredited Member NATIONAL HOME STUDY COUNCIL

Pocket Size—Loose Leaf

LEFAX

TECHNICAL DATA BOOKS

$1.25

Printed on loose leaf, 6 hole, 6¾"x3¾" bond paper, each book contains about 140 pages of technical data, condensed, accurate, essential, for engineer, technical worker, teacher, student, business man.

Architecture	Surveying Tables	Machine Design	Radio
Home Heating	Highway Eng'g.	Machinist's Data	Television & FM
Illumination	General Math	Mech. of Materials	Electricity, AC
Electrician's Data	Math Tables	Pwr. Trans. Mach.	Electricity, DC
Builder's Data	Physics	Therme. Tbls. &	AC Motors and
Lumber Data	Trig-Log Tables	Charts	Generators
Air Conditioning	Gen'l Chemistry	Phys. & Thermo-	Conversion Tabl.
Building Constr.	Chemical Tables	dynamic Data	Steel Forms
Reinf. Concrete	Analytic Chem.	Metallurgy	Welding Data
Piping Data	Mech'l Drawing	Hydraulics	Transformers,
Surveying		Metals	Relays & Meters

Write for FREE catalogs (2000 listings). See how helpful LEFAX can be to you. Send $1.25 book, or $6 for any five books to

LEFAX PUBLISHERS, Dept. MI-39, PHILADELPHIA 7, PA.

ART

LEARN AT HOME!

Enjoy glamorous high-pay career or profitable hobby. Learn Commercial Illustrating, Cartooning, Fashion Art, Lettering, TV, etc. We train you at home, in spare time. Low cost. 22-pc. art outfit free of extra cost. Write for FREE Book describing easy method. No obligation. No salesman will call on you. Washington School of Art, Studio 103, Port Washington, N. Y. (Estab. 1914)

MATHEMATICS

STUDY HIGH SCHOOL AND COLLEGE MATHEMATICS IN THE COMFORT OF YOUR OWN HOME VIA SIMPLE, THOROUGH HOME STUDY COURSES. EASY TO FOLLOW INDIVIDUALIZED INSTRUCTION. WRITE FOR FREE CATALOG.

TECHNICAL TRAINING SERVICE
BOX 148, BATH BEACH STATION, BROOKLYN 14, NEW YORK

Do FALSE TEETH Rock, Slide or Slip?

FASTEETH, an improved powder to be sprinkled on upper or lower plates, holds false teeth more firmly in place. Do not slide, slip or rock. No gummy, gooey, pasty taste or feeling. FASTEETH is alkaline (non-acid). Does not sour. Checks "plate odor" (denture breath). Get FASTEETH at any drug counter.

Mr. "N" Made $9,700 Last Year By Selling Just 20 KEEP/SAFES a Month!

Like Mr. "N" you can profit with KEEP/SAFE—the fine personal safe that undersells all others. Only safe sold direct. 95% of homes, farms and small businesses are prospects. $30 to $71 profit per sale, plus bonuses up to $12 a safe. Choice territory, chance to become district agent. FREE DEMONSTRATOR! Get details, giving address including county.

JOHN D. BRUSH & CO., INC.
561 West Ave. Rochester 11, N. Y.

DOES GETTING UP NIGHTS MAKE YOU FEEL OLD?

NEW YORK—Special: Thanks to new, scientific laboratory formulation, thousands of men and women now escape feeling old, tired, irritable and depressed from losing sleep and worrying about "Bladder Weakness"—too frequent, burning and itching urination, Bed Wetting, Getting Up Nights—or Strong Cloudy Urine, due to common Kidney or Bladder Irritations, which often result in secondary Backache, Headache and Nervousness. In such cases *New Improved* CYSTEX usually gives quick, calming relief by combating irritating germs in acid urine; and by relaxing, analgesic pain relief. Safe for young or old. Get CYSTEX at druggist. Feel better fast or money back.

Increase Prestige, Increase Earnings

IMPROVE YOUR MEMORY-*at home!*

Learn how to REMEMBER EVERYTHING
Names! Faces! Facts! Figures!
Achieve greater earnings, real self-confidence.

DR. BRUNO FURST, world famous memory expert, will show you how you can do this at home in your spare time at low cost. Never again will you have to suffer the embarrassment of forgetting names, faces, significant sales facts, important dates, in fact anything and everything you wish to remember! If you can read or write, you can apply his simple memory principles and achieve greater success in business and social life. This course is taught at leading colleges and industrial firms. U. S. military installations, etc. Write today for FREE fact folder.

See article in this issue, "Forget Something?", by Lester David. (See contents listing for page number)

DR. BRUNO FURST COURSE IN MEMORY AND CONCENTRATION
Dept. 2M, 365 West End Ave., New York 24, N. Y.

SEWS LEATHER

AND TOUGH TEXTILES LIKE A MACHINE

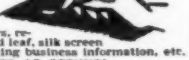
With SPEEDY STITCHER Automatic Sewing Awl, anyone can quickly and skillfully sew or repair anything made of LEATHER, CANVAS, NYLON, PLASTIC, or other heavy materials. Sews firm, even lock-stitches like a machine. Gets into hard-to-reach places. Specially made for heavy duty sewing on LUGGAGE, FOOTWEAR, RUGS, AWNINGS, SAILS, SADDLERY, UPHOLSTERY, OVERALLS, AUTO-TOPS, SPORTS GEAR, and other tough sewing jobs. Here's the handiest tool you'll ever own. Will save you many times its small cost. Comes ready for instant use . . . complete with bobbin of waxed thread and 3 different types of diamond-pointed needles. Easy-to-follow directions will make you an expert in minutes. Extra needles and waxed-thread always available. Save money, send $1.98 for postpaid delivery. If C.O.D., $1.98 plus postage. MONEY BACK GUARANTEE.

SPORTSMAN'S POST
366 Madison Ave., Dept. A-123, New York 17

ONLY **1.98**

SIGN PAINTING

Home-Study Course — Only $5.95



Teaches you commercial sign painting and sign building as it is being done TODAY in leading shops all over the country. Complete practical course for self-instruction. Shows latest methods of truck lettering, office doors, wood letters, reflecting signs, plastics, sprayed signs, gold leaf, silk screen process, up-to-date alphabets, money-making business information, etc.

SATISFACTION GUARANTEED OR REFUND!

Contains all the instruction of a high-priced correspondence course. Full price, only $5.95, postpaid. Or C.O.D. plus postage. No risk—order today. Satisfaction or money back! Order "Sign Painting Course."
NELSON-HALL CO., 210 S. Clinton St., Dept. 3CR-3, Chicago 6, Ill.

LAW FREE BOOK

THE LAW TRAINED MAN

Write today for a FREE copy of illustrated law book, "THE LAW-TRAINED MAN," which shows how to earn the professional Bachelor of Laws (LL.B.) degree through home study of the famous Blackstone Law Course. All necessary books and lessons provided. Moderate cost; convenient monthly terms. Write for FREE law training book today.

Blackstone School of Law, 307 N. Michigan Ave.
Founded 1890 **Dept. 63, Chicago 1, Ill.**

You can make money in

WATCH REPAIR

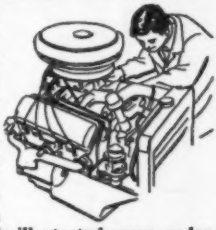
Learn at home the low cost Sweazey Way

Watch repairing pays up to $6 an hour, part time watch makers report on survey. Unique and modern Sweazey home study System starts you making repairs right away on Swiss and American watches. Professionally prepared training. No previous experience needed. Free sample lesson and opportunity book give all facts. Write today. No obligation.

CHICAGO SCHOOL OF WATCHMAKING
2330 N. Milwaukee Ave., Dept. 639, Chicago 47, Illinois

This Amazing New Home Training Plan in Auto Repairing

starts you earning spare-time money in weeks—makes you an expert mechanic in months!



No longer need you stand by as experienced mechanics take their choice of the 100,000 job openings in the auto repairing field. Now you can get ready for the big money—the bright future—in just a few months. *Now you can have new CTI training.*

This wonderful new home study course is better written, more clearly illustrated, more understandable. It offers more up-to-date, fresh, usable knowledge. It includes finer tools, more costly testing instruments. And it's so practical that you can put your training to work soon after you enroll—you can actually fix cars spare time and earn good money. Many students earn $20 to $50 a week.

Auto mechanics in the large cities average $3.00 an hour. If you prefer, you can open a shop. An expert says that America is short 25,000 repair shops. Discover how easily you can qualify for a top-pay job in America's No. 1 industry. *Mail coupon below for the new CTI catalog and sample lesson.*

Get Experience Using Tune-Up Kit & Tools

(included with training)

CTI sends you a Tune-Up Kit, the kind that skilled mechanics use to locate engine troubles. You receive a Compression Tester; Vacuum Gauge & Fuel Pump Tester; Ignition Timing Light; portable steel case. You also get mechanic's tools, including socket set. You acquire *experience* using kits.

DIESEL MECHANICS OR BODY-FENDER REBUILDING

instruction is also yours—at no additional cost. But get all the facts on CTI training. Discover how we train you in Tune-Up; Overhaul; Electric, Cooling & Lubricating Systems; Power Brakes; Power Steering; Automatic Transmissions; Clutches. Mail coupon for 2 free booklets.—Commercial Trades Institute, Chicago 26, Ill.

MAIL TODAY • TWO FREE BOOKS

COMMERCIAL TRADES INSTITUTE
1400 GREENLEAF AVENUE DEPT. A-1027
CHICAGO 26, ILLINOIS

Mail me your two opportunity booklets: *Big Money in Auto Mechanics;* and *Sample Lesson.* Both FREE.

Name_____ Age_____
Address_____
City_____ Zone____ State_____

4 COLOR DESK SET

4 PENS & HOLDER

Writes Red, Blue, Green and Black

88¢ PLUS POST.

Four giant size matching ball point pens plus beautiful Desk Holder. Has handsome design of $15 sets—now yours for 88 cents complete! New, first quality. Each pen writes different color, Red, Green, Blue or Black. Each finished in color it writes—so you can't mistake the color you want. Every pen 6½ inches long. Sleek, modern elegant. Guaranteed leak-proof. Holder crafted in unbreakable Ebony-like plastic. Send 88c plus 12c mailing charge (check, cash or money order). Satisfaction guaranteed or your $1 back quick!

THORESEN, INC., Dept. 10-C-123
585 Water Street • New York 2, N. Y.

PLAY RIGHT AWAY ANY INSTRUMENT

—even if you don't know a single note now

NOW it's EASY to learn ANY instrument. No boring exercises. Even if you don't know a single note now you can play delightful pieces—from your FIRST lesson! BY NOTE. Make amazing progress. No special "talent" needed. Learn at home in spare time. Without a teacher. Low cost! Soon you can play popular music, hymns, classical and any other music. Over 1,000,000 students, including Lawrence Welk.

FREE BOOK. Send this ad with your name and address filled in below, to: **U. S. SCHOOL OF MUSIC, Studio A223, PORT WASHINGTON, N. Y.** (No obligation, no salesman will call.) Our 41st year.

Name .....

Address .....

NEW WONDER AUTO GLAZE

with Miracle DOW CORNING 200 Fluids

FREE SAMPLE

Gives You $55.00 a Day Clear Profit . . . on Your Own Exclusive Route!

GUARANTEED to outshine, outlast and outperform ANY wax polish on the market today—or money back!

FAST, REPEAT SELLER! Needed by 45,000,000 car owners. Demonstrates like magic. Just apply, wipe off. No hard rubbing. Keeps car and chrome like new for months!

OVER 175% PROFIT! Retails $2.00 pint (year's supply). Your profit can be over $1.35 each pint.

FREE SAMPLE sent to try on your car. Rush name for FREE money-making details and FREE sample. No Obligation!

ROYALTONE PRODUCTS CORP., Dept. M-3
1035 E. 10th St., Brooklyn 30, N. Y.

Regular price of 9 x 12-ft. heavy transparent Plastic cloth is $1.00 —our special low Sale price, two for $1.00! Protects rugs, furniture & floors when painting. Perfect cover for cars, boats, buggy, appliances, bicycles, lawn furniture, etc. Make into aprons, tablecloths, lampshades, appliance covers, etc. Waterproof, greaseproof, dirtproof—clean with damp cloth. Each cover is full one piece, no seams! Send $1.00 plus 25c for pstg. & hldg. or **$1.25 for two** 9 x 12 Cloths. Money-back guarantee. L. & M. CO. Dept. PL-204, Box 681, St. Louis, Mo.

"YOU ARE UNDER ARREST!"

Help Bring Crooks to Justice Through Scientific

CRIME DETECTION!

We have taught thousands this exciting, profitable, pleasant profession. Let us teach you **in your own home.** Learn Finger Printing, Firearms Identification, Police Photography, Secret Service Methods thoroughly, quickly, at small cost. Over 900 of all American Bureaus of Identification employ I.A.S. students or graduates. Write for FREE "Blue Book of Crime."

(A Correspondence School Since 1916)

INSTITUTE OF APPLIED SCIENCE, 1920 Sunnyside Ave., Dept. 3763, Chicago 30, Ill.

Find HIDDEN TREASURES

GOLD, SILVER, PRECIOUS METALS with the Famous Model 27 Metal Detector. Lightweight, ultra-sensitive, low cost. None finer. Also GEIGER COUNTERS for uranium and the VIOLITE for tungsten. INFORMATION FREE

THE *Detectron* CORP. Dept. A-3
5528 Vineland Ave., No. Hollywood, Calif.

NEW CAR THIEF SIGNAL

Lightning Seller
Samples for Trial

NORTHWEST ELECTRIC
Dept. 16 Mitchell, S.Dak.

CLEANS WALLS NEW WAY!

Amazing Invention

DRY roll wallcleaner. No mess. No muss. Simply glide over walls. Removes dirt *like magic* from Wallpaper, Painted Walls, Ceilings, Window Shades. Leaves beautiful lustrous finish. Take orders. Earn money!

SAMPLES for TRIAL

Sample offer sent at once to all who send name. Hurry—just a postcard will do. SEND NO MONEY—Just your name.

KRISTEE CO., Dept. 756, Akron 8, Ohio

DON'T PAY FOR THESE GREAT SHOES!

Air Cushion RIPPLE SOLE Shoes

GET THEM WITHOUT COST AS A REWARD — PLUS — THE CHANCE TO "BE BOSS" OF YOUR OWN $10,000 A YEAR SHOE BUSINESS!

8" Boot with dress shoe comfort

Over 180 Styles for Men, Women and Children

Brand new plan! You can earn marvelous new shoes instead of paying for them—and develop an extra income for life! Sell friends Work, Dress, Casual Shoes and Boots in spare time. Revolutionary new leather soles guarantee twice the wear! Simple 2-finger demonstration of patented AIR CUSHION comfort makes shoe selling a snap! We back you with over a quarter million pairs in stock. Sizes 4 to 18, widths AAAA to EEEE. Also earn Advance Commissions to $5.00 a pair, plus Big Bonus. No experience, no investment. Shoe samples supplied.

SEND FOR NEW OUTFIT!

Everything you need to succeed in an independent business of your own will be rushed to you—without obligation. You can't lose—write today!

CHARLES CHESTER SHOE CO.
Dept. C-5929, Brockton 64, Mass.

WORLD'S LOWEST PRICED CALCULATOR!
NEW! NEW! NEW!

TOM THUMB ADDING MACHINE

HOT $3.98 But Only **$1.97** $2.03 in Penna. including 3% Tax.

With beautiful Leatherette carrying case. MADE IN AMERICA BY AMERICANS. Beware of cheap imported imitations. ADDS UP TO ONE BILLION—1,000,000,000—SUBTRACTS—MULTIPLIES—DIVIDES Mistake Proof—Positively 100% Accurate—Lightning Fast—Shock Proof Solid Steel Mechanism—GUARANTEED FOR YOUR LIFETIME. Ideal for Housewives, Shoppers, Students, Engineers and Tax work. Take it to the Super Market—Save $ $ $ every week. We pay postage if you send check, cash or money order—or just send your name & address and pay postman $1.97 plus postage. Immediate Delivery—10 Day Free Trial—Satisfaction Guaranteed or money refunded by return mail.

SPECIAL GIFT OFFER—3 Machines for only $4.99
AGENTS WANTED M'ke easy money selling a Top Quality Calculator at our unbelievably low price.

TOM THUMB ADDING MACHINE
P.O. Box 5066, Dept. M-39, Philadelphia 11, Penna.

HANDS TIED?

—because you lack a HIGH SCHOOL DIPLOMA

• You can qualify for an American School Diploma *in spare time at home!* If you have left school, write or mail coupon for FREE booklet that tells how. No obligation of any kind.

OUR 62ND YEAR

AMERICAN SCHOOL, Dept. H328
Drexel at 58th, Chicago 37, Illinois

Please send FREE High School booklet.

Name.....

Address.....

City & State.....

Accredited Member NATIONAL HOME STUDY COUNCIL

Only $6.00 starts you in TELEVISION and RADIO

Learn in spare time at home to fill the best paying jobs—my new, faster way!

Mason R. Warner
President

We're making it easier than ever to become a well paid Radio-TV Service Technician the proved 'Learn-by-Doing' Sprayberry way!

EARN WHILE YOU LEARN!
Trained Radio-Television Service Technicians are needed at once by the thousands! If you are looking for better pay, a bright future and interesting work . . . there's a place for you in Radio and Television. Be ready to step into a good paying job in 10 months or less . . . or your own profitable business! Train at home in spare time. I'll help you earn extra money while you train . . . doing instructive radio service jobs. Our new tuition terms are more liberal than ever . . . only $6 starts you towards success in this booming field!

Get valuable shop bench practical experience fast with expertly engineered kits you'll assemble.

25 KITS OF RADIO-TV PARTS
In addition to modern lessons, you train with actual parts and equipment. Build the famous Sprayberry Training Television Set, Multi-Range Tester, 2-Band Radio, Test Equipment—all yours to keep. Get latest training on Color TV, Transistors, Hi-Fi and UHF Conversions!

SEE HOW EASILY YOU CAN LEARN
See for yourself . . . in actual pictures and descriptions . . . what Sprayberry Radio-Television Training offers you. Backed by almost 30 years of training experience. Three training plans to suit your exact needs. Rush coupon today for big new catalog and sample lesson. No obligation; no salesman will call.

SPRAYBERRY ACADEMY OF RADIO-TV
1512 Jarvis Ave., Dept. 15-S, Chicago 26, Ill.

FREE 60 Page Catalog and Sample Lesson

Sprayberry Academy of Radio-Television
1512 Jarvis Ave., Dept. 15-S, Chicago 26, Ill.

Please rush catalog on your ALL-NEW Radio-Television Training Plans. I understand this does not obligate me. No salesman will call. Include Sample Lesson FREE.

*Name*_____ *Age*_____

*Address*_____

*City*_____ *Zone*____ *State*_____

LOOK

AT THE LOW, LOW PRICES

Jeeps	$223	Tractors	$68
Trucks	$212	Motors	994
Boats	$5.90	Airplanes	$366
Fork-lifts	$197	Typewriters	$6.80
Compressors	$9.69	Generators	$8.78

PAID AT GOV'T SURPLUS SALES

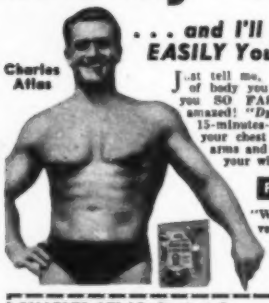
PAY 1¢ on the DOLLAR

for 1000's of Useful Items of

U. S. GOV'T SURPLUS

You BUY DIRECT from U. S. Government at TREMENDOUS savings. Eliminate middlemen—Save BIG MONEY! Pay as LOW as 1c on the dollar or less. Our Directory Gov't Surplus Sales lists 100's Army, Navy, Air Force Gov't Surplus Depots. Many of them right in your own back yard. BUY JEEPS, sports equipment, hunting, fishing and photographic equipment and supplies, radio, electronic and electrical equipment, trucks, boats, airplanes. Plumbing, hardware, office equipment & supplies. Tools, machinery, furniture. We DO NOT sell jeeps or other surplus. This indexed book tells how to buy Gov't Surplus direct. No dealer profits to pay. Get on the gravy train while you can. Send $1 TODAY for "Gov't Surplus Directory" to AVIATION SURPLUS, Dept. M-3, Box 789, York, Pa.

Check the Kind of Body You Want



Charles Atlas

. . . and I'll Show You How EASILY You Can Have It!

Just tell me, in coupon below, the kind of body you want—and I'll give it to you SO FAST your friends will be amazed! *"Dynamic Tension,"* my easy, 15-minutes-a-day method, will make your chest and shoulders bulge . . . arms and legs surge with power . . . your whole body feel "alive!"

FREE BOOK Learn how I became "World's Most Perfectly Developed Man."—Mail coupon!

CHARLES ATLAS, Dept. 6-C, 115 East 23rd Street, New York City 10, N. Y.

CHARLES ATLAS, Dept. 6-C
115 East 23rd St., New York 10, N. Y.
Dear Charles Atlas: Here's the kind of body I want:
(Check as many as you like)

☐ More Weight—Solid—in The Right Places
☐ Powerful Arms, Legs, Grip
☐ Broader Chest, Shoulders
☐ Slimmer Waist, Hips
☐ Better Sleep. More Energy

Send me absolutely FREE a copy of your famous book showing how *"Dynamic Tension"* can make me a new man—32 pages crammed with photographs, answers to vital questions, and valuable advice. No obligation.

NAME _____ AGE____
(please print or write plainly)
ADDRESS _____
CITY_____ ZONE____ STATE_____

TEN

delightful, exciting

MOVIES

FANTASTIC OFFER ALL TEN MOVIES IN 8mm FOR ONLY $2 (16mm—$4)

The movie buy of a lifetime! Ten subjects, all different, brand new and thrilling, and all yours for only 20c each. You must be delighted or your money back! Rush $2 (cash, check or money order) to:

SENSATIONAL MOVIE OFFER
Box 46856, Dept M-5
West Hollywood 46, Calif.

STUDY TO BE A DOCTOR

of PSYCHOLOGY or METAPHYSICS

Obtain a Ps.D., Ms.D., D.D., or Ph.D. Be a Teacher, Lecturer or Accredited Practitioner. Teach others how to achieve Health, Happiness and Contentment. Chartered by State. Correspondence Courses only. Write for FREE book telling how.

THE NEOTARIAN FELLOWSHIP
Desk 3, Pickwick Building Kansas City 6, Missouri

GERMAN AUTOMATIC 6-SHOT REPEATER —22 CAL.

Self-ejecting clip. Firing spring adjustable! Precision made by the Finest West German Gunsmiths—Wonderful for sporting events, theatrical performances, to scare would-be attackers, etc. 4" long, perfectly balanced. Sold on a money-back guarantee —(Not available to residents of Calif.) Send $6.95 Cash, check or Money order to:

$6.95 Postpaid

BEST VALUES CO., Dept. G-472, 403 Market St., Newark, N. J.

EARN MORE *in* TRAFFIC *and* TRANSPORTATION

THE FAST GROWING PROFESSION!

Outstanding opportunities exist today for excellent paying positions in the Traffic & Transportation field due to the great shortage of qualified men and women.

LaSalle traffic specialists can train you in your spare time through a proven step by step success plan—which has helped thousands to rise rapidly to top level traffic positions. More than 1,400,000 ambitious men and women have trained for greater success through our famous problem method.

Industry, Truck Lines, Steamship Lines, Railroads, Air Lines and Government are constantly seeking skilled help who can qualify for the better jobs and more money.

Get all the facts. Our book, describing the opportunities in Traffic and Transportation, is Free. Send for it today. Learn how you can prepare at home for the many fine positions open in this highly profitable and constantly expanding field.

Accredited Member, National Home Study Council

LA SALLE EXTENSION UNIVERSITY
A Correspondence Institution
Dept 3493T, 417 S. Dearborn, Chicago 5, Ill.

WAR SURPLUS BARGAINS SAVE UP TO 90%

AC POWER PACK Use your car, truck, boat for mobile AC power supply. 110 V. 60 cycle AC Gen. 3600 RPM. This versatile generator can be adapted to any engine. Carry your own AC power wherever you go on land or sea. Great for contractors, farmers, fire dept., Civil Defense, wherever emergency AC power is desired. Rugged construction. Tremendous overload capacity. Dual plug-in receptacles, mounts quickly and easily on engine and is driven from fan belt. Both units supplied with dash mount type control panel—with light and voltmeter. Also included is remote control cable and all mounting brackets. NEW. 100% guaranteed.
Model A-2, 1350 watt, $99.50. Model A-3, 2500 watt, $129.50

FAMOUS NAVY MK14 AIR COMPRESSOR Great for tree, termite, airbrush & paint spraying; filling tires, aquariums, etc. Dual & remote control electric receptacles. 115v 60 cycle AC, heavy duty HP. Westinghouse Motor. Direct drive. Water & explosion-proof. Built-in air filter, adjustable pressure setting up to 47 lbs. 3. cu. ft. per min. Self-contained switch. Mounting brackets. These units made under license of Sperry Gyroscope Co. Wt. 66 lbs. gross. Approx. GOVT. COST $585. Like NEW. $23.95.
With portable steel hand cart (shown), rubber wheels, specially constructed for mounting this unit. Incl. 25' rubber air hose. 8' extension cord with plug & fittings. Wt. 76 lbs. Complete with cart—$36.95.
With new internal pressure spray gun with 3 adjustable spray tips. 1 qt. cap. $33.95 complete.

"DELUXE 11" ARC WELDING KIT
Consists of 160-250 AMP Gen., voltage reg., ammeter, shunt, adjustable helmet, electrode holder, pr. welder's gloves, 30' welding cable, reactor coil, giant toggle switch, rheostat. Approx. GOVT. COST $850. All units guaranteed pre-tested. $34.95 complete.

"SUPER 9" 200 AMP WELDING KIT
With Deluxe accessories consisting of one 200 AMP Gen., adjustable helmet, electrode holder, 30' welding cable, rheostat, giant toggle switch, voltmeter, voltage reg., 1 pr. heavy-duty welder's gloves. All units guaranteed pre-tested. Approx. GOVT. COST $500. Most items new—all perfect. $26.00.

WELDING CABLE DOUBLE-O, heavy duty, neoprene jacket, fiberglas insulation. NEW. Approx. GOVT. COST $40. Will handle 400 amps. or better. 50' lengths $14.50. 100' lengths $26.00.

NEW! Welding Reactor for above kits. 200 Amp. cap. or better. NEW. $7.95.

A-10-A BUBBLE SEXTANT. A terrific navigational aid on land, sea or air. Adjustable bubble and nite lite. This is a tremendous value. Comes complete with additional components consisting of 3-power extension lens, additional bulbs and batteries, hardwood carrying case. Approx. GOVT. COST $450. Like NEW. Only $16.95.

B-16 KOLLSMAN AIRCRAFT COMPASS Ideal for boats, cars, etc. Grad. in 5° increments. Liquid-filled. Lighted. Poly-plane compensator. Panel mounting. 3 1/8" dia. face; 4 1/2" deep. Checked & tested in our own lab. Approx. GOVT. COST $150. Like NEW. $12.95 ppd.

140-1 REDUCTION GEAR For beaching boats, winches, hoists. Ideal for motor in golf or boy's electric car. DC motor & clutch. Easily reversible wiring diagram furnished. Hi torque, 1° speed. Runs on 6-12 or 24 V. Wt. 65 lbs. gross. Approx. GOVT. COST $300. Like NEW. $13.00. Matched splined gear for above—$3.00 ea.
*225-1 Reduction Gear—$13.50

11 PIECE CROWFOOT WRENCH SETS Wrenches snap onto T-bar in 3 different positions. The only wrenches for hard-to-get-to places. Mfd. by Plomb Tool Co. for U.S. Armed Forces. Finest case hardened tool steel. No shop mechanic should be without this set. Approx. GOVT. COST $47. NEW. $5.95 ppd.

WOOD PROPELLER Genuine rock maple radio drone "prop." perfect for den, trophy room, boy's room. Smooth, highly varnished, 30" tip to tip. Clock, barometer or photo can be inserted easily into center (mounting holes provided). Can use to operate ice sleds, etc. Approx. GOVT. COST $37. NEW. $4.95 ppd.

BENDIX GEROTOR PUMP & MOTOR
Use wherever fluid pumping required. Excellent for hydraulic installations. Has 3/4" pipe connections, built-in relief valve adjustable up to 1500 lbs. Max. cap. 6 GPM. 1 1/2 H.P., 24 V. motor. Use on 12 to 36 V. Approx. GOVT. COST $350. NEW $10.95.

DRAFTING MACHINE For engineers, draftsmen, designers, architects. Portable. Complete with 11 in. x 17 in. hard surface drawing board with scale divided in 50ths to inch and 180 deg. protractor. This unit is not a toy, it's the real McCoy! NEW. While they last—$10.50 ppd.
*Same as above with 10 in. x 13 in. drawing board—$9.95 ppd.

NEW! 1959 CATALOG! BIGGER & BETTER THAN EVER...971 price cuts. 1000's of bargains in war surplus & other items! 100's of pictures! Send 25c in coin for your copy today!
Ppd. prices USA only. Other prices FOB Culver City, Calif.
Send cash, check or money order. 50% deposit on COD.

AIRBORNE SALES CO., INC. DEPT. MI359
8501 Stellar Drive, Culver City, Calif

Prepare for your career in

METALLURGY
AIR CONDITIONING
INDUSTRIAL ENGINEERING
MECHANICAL ENGINEERING

Missiles or machinery, rockets or refrigeration, MSOE equips you for a career in many fields:

PRODUCT DESIGN • RESEARCH
DEVELOPMENT • QUALITY CONTROL
TIME STUDY • PURCHASING
SALES ENGINEER

When you graduate from the Milwaukee School of Engineering, you are prepared for a dynamic career as a Mechanical Engineer or Engineering Technician. Under a faculty of specialists, you gain a sound technical education in modern, completely equipped laboratories and classrooms. As a result, MSOE graduates are in great demand and highly accepted by industries nationally.

At MSOE you will meet men from all walks of life and all parts of the country — some fresh out of high school or prep school, others in their twenties — veterans and non-veterans.

You can start school in any one of four quarters and begin specializing immediately. Engineering technicians graduate in 2 years with an *Associate in Applied Science* degree. For a *Bachelor of Science* degree in Engineering, you attend 4 years. A 3-month preparatory course also is available.

If you're interested in any phase of metallurgy, air-conditioning or mechanical engineering, be sure to look into the programs of study offered by the Milwaukee School of Engineering. Just mail coupon.

FREE CAREER BOOKLET

MILWAUKEE SCHOOL OF ENGINEERING
Dept. MI-359, 1025 N. Milwaukee St., Milwaukee, Wis.
Please send FREE Career Booklet. I'm interested in
☐ Mechanical Engineering ☐ Air Conditioning
☐ Industrial Engineering ☐ Metallurgy
☐ Electrical Engineering

Name _____ Age _____
Address _____
City _____ Zone _____ State _____
☐ I'm eligible for veterans education benefits.
MS-112

100X Area Magnifying Projector

— Enlarges Pictures, Printing, & Objects! — Full Color!

NEW! Electric Magna-Vue Optical Instrument projects & enlarges clippings, pictures, sketches, objects in full natural color, correctly & readable. Project on wall, screen or table. *MAGNIFIES 100 AREAS.* Enlarges any material up to 3¼x4 in. to 32x40 in. For home, school, class, business, shop use. Also make signs, sketches easy from any copy. Enameled steel. 10x7½-in. high. Quality 2" focusing lens. Operates on standard 110 volt current. Money back guarantee. *Price Postpaid* **$4.98**

JOHNSON SMITH CO., Dept. 766, Detroit 7, Mich.

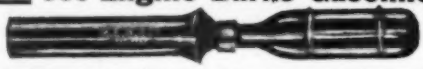
Pocket Transistor Radio

"Hit Parade" Mighty Midget $7.95

Low Price! Smart Design! Marvelous Reception! Size of cigaret package, yet thrilling performance. Weighs only 3 ounces. Listen while traveling, at ball game, in home or office or school. Includes Hi-Fi speaker-phone for private listening. Modern two-tone moulded plastic case, red with gold metal grille. Complete broadcast band. On-off switch one end. Uses standard penlight cells (included). Guaranteed. Complete, ready for immediate playing. Postpaid Only **$7.95**

JOHNSON SMITH & CO. Dept. 766 Detroit 7, Michigan

New Jet Engine Burns Gasoline



Powerful continual thrust for models: boats, cars, planes. No moving parts. Easy to start. Runs on regular gas. 6-in. long. Complete. Only **$1.49**

JOHNSON SMITH & CO. Dept. 766 Detroit 7, Michigan

Catalog of 2900 Novelties 10c

Send 10c for amazing catalog of novelties, live animals, scientific supplies, hobbies, funmakers, planes & boats, looms, magic tricks, joke articles, unusual seeds, gadget timesavers, cameras, optical goods, projectors, movies, lucky jewelry, religious novelties, disguises, musical instruments, stamps, coins, puzzles, fortune tellers, radios, auto & bike accessories, telescopes, magnifiers, compasses, banks, smokers' gadgets, artists' supplies, printing sets, engines, motors, shockers, knives, billfolds, guns, rifles, sports, books, games, plants, etc. Send 10c.

JOHNSON SMITH & CO. Dept. 766 Detroit 7, Michigan

ACCORDION PRICES SMASHED

SAVE 50%

5-DAY FREE TRIAL!

Play the most popular instrument of all... for fun, leadership and profit! Over 40 newest models of glorious tone and breathtaking beauty offered at amazing low prices—save 50% and more! Buy direct from world's leading dealer. Small down payment; easiest terms on balance. Extra bonus gifts FREE if you buy during sale. Trade-ins accepted. Try before you buy on FREE 5-Day NO-RISK PLAN. Satisfaction or money back. Lifetime guarantee. Rush coupon for big new COLOR Catalogs and lowest wholesale prices. ALL FREE! No obligation. Write TODAY!

FREE BONUS GIFTS for promptness
- E-Z Lessons
- Music Stand
- DeLuxe Case

other gifts, too!

Accordion Manufacturers & Wholesalers Outlet
Dept. MX-39, 2003 W. Chicago Ave., Chicago 22, Ill.
Send FREE Color Catalogs and wholesale prices.

NAME .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

ADD INCHES TO HEIGHT

without anyone knowing how you did it!

Change to

THE ORIGINAL AND GENUINE **ELEVATORS**® HEIGHT-INCREASING SHOES "YOUR PERSONAL PEDESTAL" © TRADE MARK OF STONE-TARLOW CO., INC.

Within seconds you can "grow" almost 2 inches taller, with amazing "ELEVATORS" height-increasing shoes! Everyone will notice how much better you look, but only you will know that you are wearing "ELEVATORS"! They look—they feel—like any other fine, smart shoes. Over 30 styles. Most styles $25.95

Write for FREE BOOKLET today!
STONE-TARLOW SALES CORP.
Dept. 7-39, Brockton 68, Mass.

EXCLUSIVE DOUBLE-BEARING HEAVY DUTY PUMPS

IRRIGATE • DRAIN • CIRCULATE • SPRAY

Use ¼ HP motor or larger. . . . 1 HP for up to 7,500 GPH; 1,000 GPH 60' high; or 3,000 GPH from 25' well. 1¼" inlet; 1" outlet. Stainless shaft. TYPE X—**$10.95** 2 oil-less bronze bearings. Won't rust.

TYPE XB—Ball bearing model. Best for belt drives **$12.95**

Postpaid if cash with order. Don't delay—send for yours today!

MONEY BACK GUARANTEE

Centrifugal and Gear Pumps in All Sizes

LABAWCO PUMPS, Belle Mead 29, N. J.

LEARN NOW! How to Become a •GAME WARDEN •GOVT. HUNTER

• Join Forestry, Wildlife Services!

Let your love of field and forest guide you to real success! *Be a career conservationist!* – Protect resources. Arrest violators. Work with wildlife amid scenic surroundings, away from city pressures. Enjoy a "way of life" others can't even buy! Good pay, security, prestige. *Full time and seasonal opportunities, men 17 to 45!* Hunting, farming, military experience valuable. Prepare now, spare time. HELP FILL NEED IN YOUR AREA! All states. If over 17 write NOW!

FORESTRY & WILDLIFE COURSE, Dept. C-153, 1038 S. La Brea, Los Angeles 19, California

MAKES OVER $1,000 A MONTH IN BUSINESS WITH MAYFLOWER

G. ROBINSON

Yes, George Robinson made over $12,000 last year as a Contract Truckman for Aero Mayflower Transit Company, Inc., world-famous household goods mover. He says he has not only paid for two tractors, but has a new car, complete new furniture, and has built substantial bank account since joining Mayflower's contract fleet in 1953. He's just one of many successful van operators enjoying a profitable business in partnership with Mayflower.

You, too, can have this great opportunity! Our business has increased every year; we need additional tractor owners, 23 years or older to go into business for themselves with Mayflower. We furnish company paid training as needed at no cost. All you need to become independent businessman is a 1955 or newer model tractor titled in your name that meets Interstate Commerce Commission safety requirements. Also personal references. Write A. S. Davis, Box 161, Indianapolis 6, Indiana. No obligation.

MI Classified Ads

Your advertisement can reach this mail-buying audience of a million readers and more for only $1.00 per word . . . payable in advance (Check or M.O. please) . . . minimum 10 words. Copy to be inserted in May issue must be in the office March 3. Mail to MECHANIX ILLUSTRATED, 67 West 44th St., New York 36, N. Y. Word count: Zone number free. Figure one word: Name of state (New Jersey), name of city (New York); sets of characters as in key (14-D); also abbreviations as 35MM, 8x10, D.C., A.C.

SAVE MONEY • ORDER BY MAIL

• • • ADVERTISING & BUSINESS SERVICES

ADVERTISE: 24 WORDS, 100 Canadian Newspapers, $5.50. Lists Free. Advertising Bureau, 10511-B Springfield, Chicago 43.

$50 INVESTMENT—$50,000 PROFIT! Stock Market "Killings"! Fascinating details free! Forecasts, Box 871MI-6, Pelham, N. Y.

• • • AGENTS WANTED

RUN A spare-time Greeting Card and Gift Shop at home. Show friends samples of our wonderful new 1959 All-Occasion Greeting Cards and Gifts. Take their orders and earn up to 100% profit. No experience necessary. Costs nothing to try. Write today for samples on approval. Regal Greetings, Dept. 21, Ferndale, Mich.

SEEKING NEW Products? Get my outfit 47 money-making specialties. Latest conveniences for home, car. Send no money. Just your name. Kristee 60, Akron, Ohio.

MEN-WOMEN AGENTS: Sensational new moneymakers—Beautifully hand-painted plastic personalized photo enlargements, compacts, rings, bracelets, lockets, etc. Simply take orders, pocket 40% commission—we deliver and collect. Sales outfit free. Novelco, 3343 North Avenue, Chicago 47.

EARN $12,000 YEARLY—only two sales daily. World's Best Seller, The Holy Bible (Illustrated) Protestant or Catholic. Margareta's, P. O. Box 92, Hazleton 11, Penna.

BUY WHOLESALE: 100,000 Nationally Advertised Products. Appliances, Cameras, Sporting Goods, Housewares, Watches, Typewriters, Tools, Clothing, etc. Discounts to 80%. Buy-Rite, Box 258, Hawthorne 122, New Jersey.

YOUR OWN business—Suits $1.50; Overcoats 65c; Mackinaws 35c; Shoes 12½c; Ladies' Coats 38c; Dresses 15c. Enormous profits. Catalog Free. Nathan Portnoy Assoc., 2109-M Roosevelt Road, Chicago 8, Ill.

PRINTING, ADVERTISING Salesmen—Excellent moneymaking sideline selling Decalcomania Name Plates, small quantities. Automobile Initials. Sign Letters. Free Samples, "Ralco," XL, Boston 19, Mass.

EVERY MAN a prospect. Request free sales kit showing line of belt buckles. Individualized with customer's name and emblems, also cap badges for trucking, bus, taxi, police, firemen. Choice 3000 emblems. Hook-Fast, Box 1425MI, Providence, R. I.

CASH COMMISSIONS at once, taking orders for magazines every family wants! No experience needed. For Free money-making kit, with everything you need, write McGregor Magazine Agency, Dept. 361, Mount Morris, Ill.

AMAZING GREETING Card Money-Maker—Make $75.00 on 100 Deluxe $1.25 Assortments. Newest 21 for $1 Tall Cards, Gift Novelties, 125 fast sellers. Gift Bonuses besides biggest profits. Experience unnecessary. Stationery samples Free, others on approval. $1.00 Gift for prompt action. Creative Cards, 4401 Cermak, Dept. 520-K, Chicago 23.

BUY WHOLESALE—shoes, shirts, pants, underwear, etc. Complete catalog. Bostonian, 14-E Dock Square, Boston 8, Mass.

SAVE MONEY! Buy Wholesale! Free catalog, general merchandise. Norris, 487-J Broadway, New York.

GOLDMINE OF 600 money makers. Free copy. Specialty Salesman Magazine, Desk 78, 307 North Michigan, Chicago 1, Ill.

GOLD OR Silver Letters, Numbers. Windows, Doors, Trucks. 1" to 6". 500% Profits—Free Samples. Atlas-R, 544 West 79th, Chicago 20.

NEW CAR Thief Signal. Lightning Seller. Samples sent on trial. Northwest Electric, 113 Mitchell, S. Dak.

SHINE CARS Without "Polish." New invention. Lightning seller. Cars gleam like mirror. Samples sent on trial. Kristee 61, Akron, Ohio.

EASY HANDWORK makes fast-selling useful articles. Sample free. Sunmade Company, Brockton 64, Mass.

SELL RECONDITIONED spark plugs. Free sample. City Motors, 2913-M Fannin, Houston 2, Texas.

MONEYMAKING HOMEWORK! Permanent Employment! Free Outfits! Hirsch, 1301-10 Hoe, New York City 59.

MAGAZINE SUBSCRIPTIONS — Highest Commissions. Bonus. Qualified Agency, 451VD Kingston, Brooklyn 25, N. Y.

FREE SAMPLE! Beautiful Feather Pictures. Send 14¢ stamps mailing. Sylviam, Apartado 9036, Mexico 1, D. F.

$1,000.00 A MONTH for making dramatic 3-second demonstration of amazing lightweight Presto Fire Extinguisher. New chemical used by Airforce snuffs out fires instantly. Only $4.95. Terrific commissions. Millions want it. Free Kit. Merlite, 114 E. 32nd, Dept. P-66W, New York 16.

WHOLESALE! 778,000 ITEMS! Amazing Discounts. Industries, Box 51-MIW, Des Plaines, Ill.

BUY WHOLESALE—25,000 Items—Catalog 25¢. Matthews, 1480-D6 Broadway, New York City 36.

• • • SALESMEN WANTED

MAKE EXTRA Money—Big Cash Commissions plus premiums for you and your customers. Sell Advertising Book Matches—sensational new Tenorama, Glamour Girls, Hillbillies; dozens others. All sizes—Quick daily sales; big repeat business. Free Master Kit makes selling easy—no experience necessary. Superior Match, Dept. F359, 7530 Greenwood, Chicago 19.

AMAZING OPPORTUNITY. New low priced fire alarm protects homes, farms, offices, factories, etc. No wiring—hangs like picture. Pays up to $1,100 a month. Free kit. Merlite (Alarm Div.), 114 E. 32nd St., Dept. F-66W, New York 16, N. Y.

OPPORTUNITY UNLIMITED Harley-Davidson Motor Co., now has available choice dealer franchises for selling and servicing its famous line of motorcycles and a new scooter line. Here is an opportunity for cashing in on the rapidly expanding youth market. Write and tell us all about yourself—your background and experience. We will give your inquiry prompt attention. Harley-Davidson Motor Co., Dept. MI, Milwaukee 1, Wisc.

MY FREE Outfit Puts You In A Fine Business! Just 8 easy orders a day brings you up to $960 *extra* a month in Big Money shoe business! Complete line Air Cushion shoes for men, women. Rush postcard for powerful Free Selling Outfit! Mason, Chippewa Falls K-142, Wisc.

SALESMEN—BIG money every day showing nationally known drain cleaner. No chemicals. Nothing like it. Minute demonstration. Commissions paid daily. Sample furnished. Campbell Co., (Est. 1928), Rochelle 606, Ill.

AMAZING NEW Liquid keeps hands clean forever! Not a cleaner—not a detergent—not a soap, but a sensational new chemist's discovery that vigorously resists soil of all kinds. Terrific 60-second demonstration sells on sight. Big extra profit details Free! Jet Products, Wampum 3, Penna.

I'LL SEND you Free stocking sample newest advancement in hosiery since nylon. Patented, full-length. Stays up over-the-knee without supporters, without girdle! Nationally advertised price $1.95. Make money introducing to friends at $1.00 pair. American Mills, Dept. 674, Indianapolis, Ind.

GET NEW Shirt Outfit Free: make $90.00 weekly on 5 average orders a day. Famous quality Made-To-Measure dress and sport shirts at $3.95 up sell fast to all men. No experience needed. Full or part time. Write: Packard Shirt Co., Dept. 831, Terre Haute, Ind.

IF YOU'RE interested in making money in selling, see the hundreds of exceptional opportunities in Salesmen's Opportunity Magazine. Send name for your copy, absolutely free. Tell us what you're selling now. Opportunity, 848 N. Dearborn, Dept. 19, Chicago 10, Ill.

ANYONE CAN Sell famous Hoover Uniforms for beauty shops, waitresses, nurses, doctors, others. All popular miracle fabrics—nylon, dacron. Exclusive styles, top quality. Big cash income now, real future. Equipment free. Hoover, Dept. C-102, New York 11, N. Y.

PUNCHBOARDS. SEND $1.00 for picture catalogue, refundable, first order. Wholesale Distributors, Post Office Box 98, Bothell, Wash.

MI Classified Advertisements

BIG MONEYMAKING Opportunity. Exclusive line uniforms, jackets, pants, shirts, coveralls, sportwear. Advertising embroidered. Every business prospect. Get Selling Outfit Free! Master Co., Dept. K-16, Ligonier, Ind.

AD MATCH Sales! Your own business—without investment! Sell for world's largest direct selling manufacturer of advertising matchbooks. Big spot cash commission. Start without experience—our tested sales kit tells you where and how to get order. Men, women—part or full time. Match Corporation of America, Dept. MI-39, Chicago 32.

AUTO ACCESSORIES, 300% Profit, Free Bonus, Cameras, Television, Luggage. Clyde, 120-J East 82, New York 28, N. Y.

$1,000.00 A MONTH for making dramatic 3-second demonstration of amazing lightweight Presto Fire Extinguisher. New chemical used by Airforce snuffs out fires instantly. Only $4.95. Terrific commissions. Millions want it. Free Kit. Merlite, 114 E. 32nd, Dept. P-66W, New York 16.

WILL YOU wear new suits and topcoats without one penny cost and agree to show them to friends? You can make up to $30.00 in a day even in spare time, without canvassing. J. C. Field & Son, Inc., Dept. L-1826, Harrison & Throop Sts., Chicago 7, Ill.

100% COMMISSION. GUARANTEED Razor Blade Sharpener. Sells Fast. Smico, 333 Hardesty, Kansas City 24, Mo.

• • • BUSINESS OPPORTUNITIES

YOUR OWN High Profit Business. Sell Name Brands, full or part time. No inventory—no investment. More than 2000 Name Brand items; lowest wholesale prices. Watches, jewelry, cameras, hi-fi radios-phonos, appliances, housewares, hardware, power tools, luggage, musical instruments, garden equipment, sporting goods, toys, many others. 8 floors of Name Brands. Million dollar inventory. Orders shipped complete within 24 hours! Send for Free beautifully illustrated catalog Now! Separate dealer price list. H. B. Davis Corp., Dept. 16, 145 West 15 St., New York 11, N. Y.

YOUR ENVELOPES addressed accurately, reasonably. Fast service. We have capable addressers in your city. Glenway System, Box 6568, Cleveland 1, Ohio.

11,000 NEW PROSPECTS Daily. Baby record books, shoes, albums. Sell mail-order. Use our literature. Write: No-Co-Ro, Capitola 16, Calif.

PLATE BABY shoes, jewelry, gifts, bronze and colored pearl. Free booklet. Bronzkrafters, 11029 South Vermont, Los Angeles 44.

GROW ORCHIDS at home. Profitable, fascinating. Successful home grower explains special light, temperature and humidity conditions orchids need. Free—full details. Orchids, 100 S. Vermont, Los Angeles 4.

$70 WEEKLY—HOME, spare time. Simplified mail bookkeeping. Immediate income—easy! Auditax, 34757E, Los Angeles 34.

BRONZE BABY Shoes: Instructions, Equipment and Mountings for genuine Electroplating Process. Largest Supplier of all Plating Equipment, Supplies. Free Catalog. Hollywood Bronze Supply, Dept. B-5, 1624 East First, Los Angeles 33, Calif.

$6,000 FOR MISTER! Mrs.: $3.500! Free "Secret Journal" Plan. Magical! Work home. Publico-NN3, Oceanside, Calif.

VENDING MACHINES—No selling. Operate a route of coin machines and earn amazing profits. 32-page catalog Free! Parkway Machine Corporation, Dept. 2, 715 Ensor St., Baltimore 2, Md.

NEW HOME-IMPORT Mail Order Profitunity! Your mailbox stuffed with money! No Selling. No experience. No investment. We supply everything. Free Details. Mail Order Distributors (Import Division), 15201 South Broadway, Los Angeles 61C3, Calif.

BRUSH PLATING Outfits for plating articles in the home and shop. No tanks necessary, Silvering Mirrors, spare or full time. Free Particulars. Gunmetal Co., Ave. A, Decatur, Ill.

QUICK PROFITS, with no capital! Take orders for magazines your neighbors like, want. Make cash on the spot! We show how with Free kit. Get yours now. Write McGregor Magazine Agency, Dept. 371, Mount Morris, Ill.

WANT TO Make Big Money At Home? $10.00 profit in an hour possible with Invisible Mending. Make tears, holes, disappear from clothing, fabrics. Steady year-round demand from cleaners, laundries, homes. Details Free. Fabricon, 6254 Broadway, Chicago 40, Ill.

"50 NEW HOME-BUSINESS Ideas" booklet, sample free. Spray exotic Velvet-Suede on anything. Flokcraft-MH, Los Angeles 61.

LEARN SEWING Machine Repairing. To $125 weekly. Sparetime. Supplies. "Add to present business." Shipping from Chicago, New York, Los Angeles. Write today! Taylor Service, Box 2126, San Bernardino, Calif.

IMPORT-EXPORT OPPORTUNITY, profitable, world-wide, mail-order business from home, without capital; or travel abroad. Established world trader ships instructions for no-risk examination. Experience unnecessary. Free details. Mellinger X-753, Los Angeles 24.

FIX TYPEWRITERS. Free Repair Course. Home operated. Remit 25¢ for book explaining Free Course and Agency Appointment. Athey, Tarentum, Penna.

WHOLESALE CATALOG—shoes, shirts, pants, underwear, hosiery, etc. Bostonian, 14-EA Dock Square, Boston 8, Mass.

$20.00 PROFIT PER Hour! Homes, offices, Insurance companies pay big money for Invisible Carpet Reweaving. Makes cuts, holes, tears, disappear from expensive rugs and carpets. Brand new industry. Huge, unfilled demand. All trade secrets revealed. Details Free. Carpeton, 1201J Rosemont, Chicago 40, Ill.

EARN MONEY at home raising fishworms for us! Backyard, garage, basement. We buy your crop! Inquire: Oakhaven 45, Cedar Hill, Texas.

EXTRAORDINARY OPPORTUNITY! Retire Now! Lead Leisurely Life. Remarkable Book Shows How. Free Details. Belmont, Wyckoff 150, New Jersey.

UNLIMITED IMPORT-EXPORT Opportunities! Earn big money from home. No experience. Capital unnecessary. Free Import Bulletin. Foreign Traders, 7814-EB Forsyth, St. Louis 5.

QUICK MONEY! "Repairing Car Batteries." At home! Easy too! Free Details! Batteryman, Penrose, Colo.

YOUR OWN home-operated business! Take over your area as our Service Distributor keeping stores supplied. Nationally advertised 28-year-old line pays you 66⅔% mark-up. Less than $100 for merchandise starts you. For samples, highly successful plan, write Novo, Inc., 1168-H Milwaukee, Chicago 22, Ill.

GROW EXPENSIVE herbs for us! Big profits home-business of your own. Year around profitunity! We supply everything necessary! Send for free rare seeds and revealing plan. (State your age.) National Herb Exchange, Dept. MH, Gardena, Calif.

GROW A living Miniature Forest or orchard (only inches high), that bears tasty tiny fruit at home. Learn amazing Dwarfing secrets! Fascinating hobby. Profitable Home-business Opportunity. Free Seeds and Plan. (State your age.) Miniature Nurseries, Dept. MH, Gardena, Calif.

$250.00 WEEK PROFIT possible. Earn at home spare time with fascinating Printing method. $5 starts you—send no money now. Free Confidential Facts and Valuable Samples. Screen-Print MH, Los Angeles 61.

CLEANS WINDOWS without mess. Strange "dry" cleaning-cloth. Replaces liquids. Windows gleam. Samples sent on trial. Kristee 107, Akron, Ohio.

WANTED: HOME producers, to be subcontractors. Cast plastic products for manufacturers in our Clearing House Service. Thousands of easily-made items required. Cash in at home, without previous experience. Plastic Service Associates, Dept. 3-MI, East Boston 28, Mass.

BUY DIRECT from Factories—Appliances, Cameras, Watches! Free details! CAM Company, 6810MI-20th Ave., Brooklyn 4, N. Y.

FREE "FRANCHISE Profit Letter" describes nationwide opportunities. Exclusive distributorships, dealerships, agency operations. Write today. National Franchise Reports, MI-528, 333 North Michigan, Chicago 1.

LEARN PROFESSIONAL TV servicing in one week's fabulous new simplified system. No big expense. No studying. No tools or equipment. Spare, full time. Own your own big profit business! Save! Amazing but true! Free! Write, TV Systems, Dept. CC-153, 1038 So. La Brea, Los Angeles 19, Calif.

COSTS 8c—RETAILS $1.00. Needed Automotive product. You manufacture, distribute, easily. Everything furnished. Wilson, Box 505-AL, Princeton, W. Va.

WE PAY $3.50 lb. dried. Grow Mushrooms. Cellar, shed and outdoors. Spare, full time, year round. We pay $3.50 lb. Free Book. Mushrooms, Dept. 183, 2954 Admiral Way, Seattle, Wash.

FREE BOOK "990 Successful, Little-Known Businesses." Work home! Plymouth—GM, Brooklyn 4, N. Y.

BOOK "505 ODD, Successful Businesses" free. Work home! Pacific-23C, Oceanside, Calif.

LIQUID MOLDING Rubber, Free Sample Shellcraft Supplies. Chaney, 1907-B East Road, Jacksonville 11, Fla.

"MAILORDER LAWS and Regulations," $1.00. Explains licenses, taxes, legal requirements. Tasker, Box 3131-M, Alexandria, Va.

OPPORTUNITY TO earn $15,000-$30,000 annually. Franchise protected. Granted on $12,500 basis. Live at home. No merchandise to buy. Selfemployed. One of most exclusive and noncompetitive Businesses in United States and Canada. Send for free explanatory booklet. Harrell & Company, Box 8-F, Louisville, Ill.

MAKE FLEXIBLE molds. Cast plaques, figurines. Free sample. Tooker, 1045-E Fairview, Hamilton, Ohio.

COLORGLAZED CONCRETE pottery made without molds. Patented method. Cemetery products, novelties, tiles. Basement leaksealing. Moneymaking projects. Booklets, details free. Men only. National Pottery, Grand Rapids, Minnesota.

BAKE NEW Greaseless Doughnuts in kitchen. Sell stores. Free recipes. Irving Ray, 3605 South 15th, Minneapolis 7, Minn.

RAISE EARTHWORMS for profit, 31 page booklet for .35¢ tells you how. Angler's, P. O. Box 265, Malibu, Calif.

ADDRESSERS, SUPPLIES Furnished, send postcard. Reynolds, 1448 Madison, Oakland 12, Calif.

CASH FROM Sawdust, Tin-Cans, Newspapers. Over 200 methods. Instructions $1.00. Charles Company, 42-EPD, Norwood, Ohio.

QUICK-BRICK. HOME improvement bonanza. Speedy production, our methods. High profits. Work from home. Stone-Craft, Box 856-D, St. Louis, Mo.

MARKETS EVERYWHERE. Make Artistic concrete birdbaths, pottery. Best coloring. Home workshop. Hundred varieties. Hollywood Cementcraft, 6527-E Wonderland, Hollywood 46, Calif.

PIANO TUNING learned at home quickly. Tremendous field! Musical knowledge unnecessary. Be independent! Information free. Empire School of Piano Tuning, Champaign, Ill. (Founded 1935).

OPERATE PROFITABLE mailorder business!! Write: Bond, 1637-K West Vernon, Phoenix, Ariz.

"HOW TO build your own mail order business." Everything supplied. Details free. Wayne's Service, M-2, 3016 Channing N. E., Washington 18, D. C.

MINK RAISING information free. Complete. Lake Superior Mink Farm, Superior, E.E. 9, Wisc.

MAKE $25-$50 WEEK, clipping newspaper items for publishers. Some clippings worth $5.00 each. Particulars free. National, 81-X, Knickerbocker Station, N. Y.

MAKE $46 FROM Square Foot Plywood; Jigsaw necessary. Free Details. Woodet, Bridgewater, Mass.

MAIL NEWSPAPER clippings daily for cash. Ketchum's Advertising, BIO58, Springfield, Ill.

MAKE GOLD letter signs. Easy Quick Profitable Sample Set $1.00. Trigg, Freeport, Ill.

BE SURE to read "How To Go Into Business For Yourself" before considering any business venture. A goldmine of expert advice and tips that can save you thousands. $1.00 postpaid. Eck, Box 338, Mahopac, N. Y.

LEARN PLASTICS Engraving! Exciting Profitunities to $5 hour, using "Duplicaler" motor attachment. Details, sample 15¢. Desco Distr's., 5262-MI Van Nuys, Van Nuys, Calif.

EARN $10,000 SELLING Books by mail. Facts free. Box 51-BE, Des Plaines, Ill.

PREFERRED LIST of foreign exporters. Limited. Rush $1.00! Ericson Imports, Box 132, Northport, N. Y.

GOOD INCOME per sale. Secured $225. investment. Telcamera, Box 301, Margaretville, N. Y.

MAKE MONEY clipping newspaper items! Newscraft, BMI-983-E. Main, Columbus 5, Ohio.

MAKE DURABLE building plastic easily. Beautiful—101 uses—800% profit. Bays Laboratory, Keams Canyon, Ariz.

EXCEPTIONAL PROFITS! "Bronzing" Baby Shoes. Mountings. Forester, 1520 Ardmore, Chicago 26.

FLORIDA JOBS, all kinds, entire state, hundreds listed. Write Fastway Service, Daytona Beach.

FREE BOOK: "609 Odd Successful Businesses." Work Home! Institute, Box 1001-MIB, Evanston, Ill.

• • • HELP WANTED

WANT A Good Job?? High Pay?? Overseas-U.S.A.?? Free Information. Employment Headquarters, 79 Wall Street, Dept. 350, New York 5.

COPYRIGHTED REPORTS. Best paying jobs with travel, adventure, promotions. Construction, aviation, shipping, oilfields, laborers, clerical, trades, supervisory, factory, unusual opportunities. Skilled-unskilled. Foreign-stateside. Men-Women. Only $2.00 ($2.25 Airmail) (COD'S Accepted), including registration-advisory service. Satisfaction guaranteed. Included free: Special reports on Alaska—Venezuela—South American opportunities—husband & wife foreign jobs. Research Services, Suite 514 MI, Meramec Building, St. Louis 5, Mo.

STEAMSHIP AND Yachting Jobs, traveling foreign countries, Box 1354, GPO, New York 1, N. Y.

WHY WORRY About Work? Escape Jobs Forever! Retire Securely Now. Lead Leisurely Life. Unusual New Book Shows How. Postcard Brings Details Free. Belmont, Wyckoff 151, New Jersey.

FOREIGN JOBS—Latin America, Alaska, Canada, up to $1500 monthly. Up-to-date 1959 Foreign Service Directory gives complete information; hot list of firms hiring for Military and Civilian Construction, Aircraft, Oil, Exporters-Importers, Mining. How-When-Where to apply. 11th successful year. $1.00. Global Reports, Box 8873-MI, Los Angeles 8, Calif.

INFORMATION — USA Overseas Jobs, High Pay, Transportation. Futures, Dept. L, 215 West 34th Street, New York City 1.

AMERICAN OVERSEAS Jobs. High Pay, Men, Women. Transportation Paid. Free Information. Transworld, Dept. 11M, 200 West 34th St., New York 1.

FOREIGN EMPLOYMENT information. Adventure, travel. Earn big money overseas. Europe, South America, Far East, Canada, Alaska. Truck drivers, clerks, construction workers, etc. Full information, sample letter, application blanks sent by return mail. Send $2.00 to Foreign Bureau, Department 101, P. O. Box 512, New Orleans 1, La.

JAPAN! MANY hi-paying jobs available. Full details—complete coverage—airmailed $2.00. Waits, C.P.O. Box 903, Tokyo.

JOBS UNLIMITED! We offer over 1,000 job opportunities to choose from. Free details. Walk's Co., 925 West Sycamore, Dept. MI, Willows, Calif.

ALASKA: HOURLY scale: Laborers $4.16; Truck Drivers $4.45; Carpenters $4.38; Plumbers $5.00; Electricians $5.00. Construction projects over $335,000,000.00. Names and addresses of companies hiring; total contract awarded; location; wage scale; also information regarding Homesteading. Send $1.00 to Alaska Employment Opportunities, Box 1032, Anchorage, Alaska.

MEN, WOMEN, U. S. A., Foreign jobs. High pay. Construction, clerical, supervisory, shipping, aviation, oilfields, etc. Skilled, unskilled. Free transportation, adventure, promotions. Unusual opportunities. Complete information plus world-wide Project Listings. Only $2.00 ($2.25 airmailed) Satisfaction Guaranteed. International Reports, Dept. C, P. O. Box 621, San Jose, Calif.

CIVIL SERVICE Jobs—Mechanical, clerical, professional — U.S.A., overseas. List $1.00. Civil Service Bulletin, 115M Haypath Road, Plainview, L. I.

CLEVELAND, OHIO, Sunday classifieds mailed $1.00. Mueller, Jr., RD #5, Medina, Ohio.

N.Y.C. JOBS available. Largest classified $1.00. Bonin, 2055 Ocean Avenue, Brooklyn 30, N. Y.

ALASKA NEEDS people for development. Many jobs in almost all career fields open in 1959. Thousands of acres farmland for homesteading. Information, send self addressed stamped envelope to Frontier Employment, Anchorage, Alaska.

JOBS OVERSEAS! Write Janecek Development Co., 109 Hub Station, New York 55, N. Y.

• • • MONEYMAKING OPPORTUNITIES

START YOUR Own Business On Credit (U. S. and Canada). Your own boss. 1425 Dealers sold $5,000 to $32,000 in 1957. We supply stocks, equipment on credit. 200 home necessities. Sales experience unnecessary. Pleasant profitable business backed by world-wide industry. Write Rawleigh's, Dept. C-U-MOM, Freeport, Ill.

MAKE $5,000 YEARLY sparetime raising mink, chinchillas, nutria, etc. Free booklet reveals proved plans. Write: Furs, 588 Mt. Pleasant Road, Toronto 3, Can.

SELL TITANIA Gems; far more brilliant than diamonds. Catalog 10¢. Diamonite, 2420-X 77th, Oakland 5, Calif.

LEARN PEST Control! $1000.00 Monthly proved. Rid homes, farms, businesses of termites, rodents, pests. New shortcut methods! It's easy, fascinating! Huge demand. Free details. APCOA, Dept. 3R, 15015 Ventura Blvd., Sherman Oaks, Calif.

EARN CASH at once, sending us easy orders for magazines your friends, neighbors want. Instant profits! We show how. For Free kit, everything you need, write McGregor Magazine Agency, Dept. 381, Mount Morris, Ill.

EARN $240.00 A Month at home, spare time doing only Two $5.00 Invisible Mending jobs a day. Big money paid for service that makes cuts, tears disappear from fabrics. Steady demand. Details free. Fabricon, 6256 Broadway, Chicago 40, Ill.

DETECTIVES—EXCELLENT opportunities. Experience unnecessary. Detective Particulars free. Write, George Wagoner, 125-J West 86th, New York 24.

MI Classified Advertisements

VENDING MACHINES—No selling. Operate a route of coin machines and earn amazing profits. 32-page catalog Free! Parkway Machine Corporation, Dept. 16, 715 Ensor St., Baltimore 2, Md.

MAKE BIG Easy Profits making costume jewelry at home in spare time! Quick, easy to make; easier to sell! Details Free! Don-Bar, 3511 W. Armitage, Dept. C-212, Chicago 47, Ill.

EARN $5,000-$15,000 YEARLY at home, in spare time. Respectable Field. No Experience or Public Contact Necessary. Proof? Send 10¢. Columbia, 8303 Grubb MI, Silver Spring, Md.

BECOME INDEPENDENT with your own franchise business. Thousands earning handsome incomes. Request interesting facts today. National Franchise Reports, MX-528, 333 North Michigan, Chicago 1.

MAKE MONEY Writing Short Paragraphs! No tedious study. I tell you what to write, where and how to sell; and supply list of editors buying from beginners. Many small checks add up quickly. Write to sell, right away. Send for free facts. Benson Barrett, Dept. C-78-A, 7464 Clark, Chicago 26.

MAKE EXTRA Money—Big Cash Commissions plus premiums for you and your customers. Sell Advertising Book Matches—sensational new Tenorama, Glamour Girls, Hillbillies; dozens others. All sizes—Quick daily sales; big repeat business. Free Master Kit makes selling easy—no experience necessary. Superior Match, Dept. FX-359, 7530 Greenwood, Chicago 19.

INVISIBLE REWEAVING: $5 in one hour possible reweaving burns, tears, mothholes. Spare-full time. Free Details. Skil-Weave, Dept. SC-363, 335 W. Madison, Chicago 6.

MEN—WOMEN! Start Money-Making Plastic Laminating Business at home in spare time. Material that costs 11¢ brings back $2.58. No canvassing or selling but mail orders bring in $20 a day. Write for full particulars Free. Rush name on postcard to Warner, Room CL-4-A, 1512 Jarvis, Chicago 26, Ill.

WE PAY $3.50 lb. dried. Grow Mushrooms. Cellar, shed and outdoors. Spare, full time, year round. We pay $3.50 lb. Free Book. Mushrooms, Dept. 184, 2954 Admiral Way, Seattle, Wash.

FLORIDA OPPORTUNITIES, job openings. Details Free. Write Charles Masten, Box 4571, Waughtown Station, Winston-Salem, N. C.

BUSINESS OF your own. Earning potential as high as $40,000 annually. Issued on $12,500 base. No merchandise to buy. Send for free explanatory booklet. Harrell & Company, Box 8-FF, Louisville, Ill.

REPAIR HYDRAULIC Jacks. Earn high wages. Directions in easy-to-read trouble shooters manual. Illustrated. Covers all models. $3.98. Hydraulic Parts Supply, Box 8695, Brightwood 11, D. C.

MAKE $25-$50 WEEK, clipping newspaper items for publishers. Some clippings worth $5.00 each. Particulars free. National, 81-X, Knickerbocker Station, New York.

MAIL TRADE magazine has moneymaking opportunities galore. Sample 25¢. Donovan, 79-M Greenbelt, Levittown, N. Y.

$3.00 HOUR POSSIBLE assembling pump lamps. Simple, easy. No house canvassing. Write: Ougor Enterprises, MI-3 Caldwell, Ark.

MAIL ORDER—Get $25 all profit orders. Free information. Gray Co., 136 Virginia, Vallejo, Calif.

$6,000 FOR MISTER! Mrs.: $3,500! Free "Secret Journal" Plan. Magical! Work home. Publico-JJ2, Oceanside, Calif.

DISTRIBUTE FREE Wholesale Catalogs. You receive $1.00 each. Instructions 25¢. Wilson Specialties, 621M N. Fancher, Mt. Pleasant, Mich.

MAKE MONEY at home. Excellent Opportunity!! Man or women, write: Merrill Histand, Box 182-EX, Hatfield, Penna.

$15.00 THOUSAND! ADDRESSING envelopes for advertisers! (We make no false claims.) Details 25¢. Barrie, Box 1247N, Jamaica 21, N. Y.

ATTENTION! MEN, Women! Earn extra cash, address advertising postcards. Langdons, Box 41107-M, Los Angeles 41, Calif.

FORTUNES MADE by prospectors! We teach you! Recognize valuable mineral deposits in your home area. Free information. Modern Prospector, 3433 Essex Road, Cheyenne, Wyo.

MAIL ORDER Secrets that make me $20,000 yearly. Full or part-time home business you can operate. Experience unnecessary. Free details. Write Richton, 231 Wyoming, Maplewood 23, N. J.

$1,000. MONTHLY POSSIBLE, raising Earthworms—African Giants. Backyard, Garage, Basement. Complete Illustrated Booklet, explains raising, feeding, packing, marketing. Only 25¢! Ozark Worm Farm-4, Willow Springs, Mo.

MAKE MONEY clipping newspaper items! Newscraft, MI-983-E. Main, Columbus 5, Ohio.

MAILORDER MEXTEXITE! Fabulous synthetic stones. Replacing Diamonds, Titania. Free details. MexTex, El Paso 1, Texas.

LET ME prove that managing money-raising campaigns for churches, hospitals, institutions pays unusually big fees. Short spare-time course backed by 35 years experience. William Arbogast, 229 East Mason Avenue, Alexandria, Va.

ATTENTION FREE Lance Artists. Have buyers, need artwork. 25¢ brings details. Darrell Studios, 3540 West Sixteenth, Indianapolis, Ind.

START BIG-PAY Business At Home in spare time. No experience needed to operate little table-top machine for bronzing baby shoes. Make $5.46 profit on every pair. Full particulars Free. Send postcard to Mason, 1512 Jarvis, Room CM4A, Chicago 26, Ill.

MAILORDER PAY$!! Business building booklet starts you right! Rush 50¢ now! Discount Distributors, Box 6006, Pensacola, Fla.

FREE FOLIO "$5,000-$45,000; Unlimited Vacations.": No merchandise. Unknown! Work home! Haylings-M7, Carlsbad, Calif.

BE APPOINTED State Notary Public. Details: Stationers, 1921 East Park Place, Milwaukee 11, Wisc.

BONANZA SECRET. Wampum mail, inexpensive. Moneysavers, P. O. Box 76, Gorst, Wash.

• • • PROFITABLE OCCUPATIONS

EARN MONEY At Home raising fishworms for us! Backyard, garage, basement. We buy your crop! Inquire: Oakhaven 3, Cedar Hill, Texas.

VENDING MACHINES—No selling. Operate a route of coin machines and earn amazing profits. 32-page catalog Free! Parkway Machine Corporation, Dept. 16, 715 Ensor St., Baltimore 2, Md.

EXCITING PROFITABLE venture, either sex over age 18. For easy instructions and equipment send $1 and self addressed stamped envelope to: Opportunity, Box 105, London Bridge, Va.

$5,000 FROM HALF Acre growing Ginseng, crop bought. Particulars 10c. Associated Growers, Sperling, Manitoba.

JOBS—HIGH Pay; USA, So. America, The Islands. All trades. Many companies pay fare. Write Dept. 71K, National Employment Information, 1020 Broad, Newark, N. J.

INVISIBLE REWEAVING: $5 in one hour possible reweaving burns, tears, mothholes. Spare-full time. Free details. Skil-Weave, Dept. SC-363-A, Chicago 6.

WE PAY $3.50 lb. dried. Grow Mushrooms. Cellar, shed and outdoors. Spare, full time, year round. We pay $3.50 lb. Free Book. Mushrooms, Dept. 102, 2954 Admiral Way, Seattle, Wash.

100% PROFIT SELLING plastic laminated wood plaques. Every professional man easily sold. Send for Free literature. Lieco, Box 66, College Pt. 56, N. Y.

REMARKABLE: GET $10.00 Orders By Mail—Keep $8.00 selling real merchandise. Write Liberty Sales Co., 210-MI39 Fifth Ave., New York 10, N. Y.

DETECTIVES—MAKE Secret Investigations. Interesting occupation. Write, George Wagoner, 125-J West 86th, New York 24.

• • • BARGAINS—WHOLESALE

BIG MULTICOLOR Wholesale Catalog! Housewares, appliances, clothing, silverware, cookware, luggage, binoculars, shavers, radios, phonographs, cameras, projectors, recorders, typewriters, sewing machines, furniture, power tools, toys, sporting goods, watches, diamonds, jewelry, automobiles, etc. Name brands. Huge discounts. Postcard: Selbyco, Decatur 130, Ill.

LARGEST WHOLESALE supply in U. S. Free catalogs. Furniture, clothing, appliances, housewares, automobiles and accessories, farm equipment, tools, hobby supplies, new products, imports. Free details. Associated Wholesalers, Box 52-MX, Burlington, Iowa.

BUY WHOLESALE: 100,000 Nationally Advertised Products. Appliances, Cameras, Sporting Goods, Housewares, Watches, Typewriters, Tools, Clothing, etc. Discounts to 80%. Buy-Rite, Box 258, Hawthorne 124, New Jersey.

ACCORDIONS WHOLESALE! Save ½. Home trial. Free catalog. Accordion Warehouse, Dept. 39-MXW, 2003 Chicago, Chicago 22.

WAR SURPLUS BARGAINS! New government releases arrive constantly. Save up to 80%. Blankets, boots, cots, tents, wearing apparel, etc. Send for Free War Surplus Catalog, Sioux Falls Surplus Store, Sioux Falls, S. D.

!!FREE!! BIG 64 page Leathercraft catalog. Hundreds of new items. Write MacPherson Bros. Leather Company, Dept. M, 730 Mission St., San Francisco 3, Calif.

TREMENDOUS PROFITS buying merchandise wholesale! Free details! Liberty Sales Co., 210-MI39 Fifth Ave., New York 10, N. Y.

SELLING OUT many items less than wholesale. Catalog 10¢. Ceewco, 5921 Lowell Road, Everett, Wash.

• • • CHEMICALS & SUPPLIES

EXPERIMENTERS: "BARGAINS Galore" Supplies Catalog, 25¢. Hagenow Laboratories, Manitowoc, Wisconsin.

• • • OF INTEREST TO WOMEN

FREE TO Women Only! Be A Beauty Advisor. No experience needed. Make 60% profit on famous nationally advertised Hollywood Cosmetics. Demonstrate to friends and neighbors and earn up to $5.00 an hour spare time—$25.00 a day full time. Later you can double your earnings by letting others demonstrate for you. Free! No charge, now or ever, for actual useable samples of Studio Girl Cosmetics. Send name on postcard to me, Harry Taylor, President, Studio Girl Cosmetics, Dept. 5093M, Glendale, Calif.

$1,000-$5,000. YEARLY POSSIBLE, addressing envelopes, postcards, for advertisers! Further information free. Mann, 427-D, Woodcliff Lake, N. J.

$15.00 THOUSAND ADDRESSING envelopes, postcards, home — longhand, typewriter. Particulars free. Q. Economy, Box 2580, Greensboro, N. C.

$200 MONTHLY POSSIBLE, Sewing Babywear! No house selling! Free information. Send name to Cuties, Warsaw 58, Ind.

"8 MISTAKES PARENTS Make." Every parent should have this new book about child training. It is free; no obligation. Simply address Parents Association, Dept. 943, Pleasant Hill, Ohio.

MAKE MONEY weaving rugs at home for neighbors on $79.50 Union Loom. Thousands doing it. Booklet free. Union Loom Works, Dept. 22, Boonville, N. Y.

MAKE $25 TO $35 weekly addressing envelopes. Our instructions reveal how. Glenway, Box 6568, Cleveland 1, Ohio.

• • • FORMULAS, PLANS

LATEST—BEST Formulas. Genuine Moneymakers. Free literature. Kemistry, Park Ridge 40, Ill.

EXCLUSIVE MANUFACTURING Formulas and Processes. List Free. Moon, Martville, N. Y.

ANY FORMULA $3.00. Catalog—Mfg. Treatise 10c. J. Belfort, 192 N. Clark, Chicago 1.

LARGE FORMULA Catalog 10¢. Big Surprise. Western Chemical, Salem, Ore.

• • • GEIGER COUNTERS, TREASURE FINDERS

SEARCHING FOR Treasure? Transistorized electronic M-Scope locates it. Lightweight. Guaranteed. From $59.50, Easy Terms. Free Catalog. Fisher Research, Dept. C-4, Palo Alto, Calif.

TRANSISTOR TREASURE Detectors, underwater detectors. Many models. Free catalog. Gardiner Electronics Co., Dept. 3, 2545 East Indian School, Phoenix, Ariz.

GOLD-SILVER DETECTORS. Geiger Counters. Violites for tungsten, etc. Best available. Guaranteed. Information Free. Detectron, 5528 Vineland Ave., Dept. 3-A, North Hollywood, Calif.

FIND TREASURE! Handbook 25¢. Locators. Howe, 811 Kansas, Atchison, Kans.

• • • PRINTING, MULTIGRAPHING, MIMEOGRAPHING

1000 GUMMED NAME & address labels $2.00 postpaid. Joe J. Jemec, Star Rt. 3, Hibbing, Minn.

1,000 BUSINESS CARDS, "Raised Letters" $3.50. Samples. Pioneer MI-3, Island Park, N. Y.

FREE BUSINESS Printing Catalog; Samples. Howprint, 723-L Eunice, Webster Groves 19, Mo.

BUSINESS CARDS with Glamour. Reasonable. Samples Free. Heavener's, Colmar, Penna.

PRINT WITHOUT press, type or machinery. Straley Arts, 410 Western, Springfield, Ohio.

HUNDRED WORD 3"x6" Circulars, 5000, $9.25. Acmeprint-M, R-1, Crossville, Tenn.

• • • PRINTING OUTFITS & SUPPLIES

PRINTING OUTFITS, type, supplies. Send dime for illustrated supply book and samples. Kelsey, Inc., H-57, Meriden, Conn.

MAKE YOUR Own self-molding rubber stamps and printing cuts. Plexirubber, Argyle 3, Wisc.

• • • RUBBER STAMPS & MARKING DEVICES

THREE LINE cushion stamp $1.00. Eldredge Industries, 152 Rosemont Ave., Trenton 8, N. J.

• • • STAMP COLLECTING

MAMMOTH COLLECTION. Monaco first day cover plus stamps from Angola, Arabia, Burma, Congo, Korea, Formosa, Liberia, Greenland, Israel, Vatican, Pope Pius, etc. Free copy of chatty stamp paper. All Only 25¢ with approvals. Stamp Bazaar, 832 Eighth Ave., NYC 19.

FREE 103 BRITISH Colony Stamps. Approvals. Enclose 10¢ for handling. Niagastamp, St. Catharines 673, Ontario.

UNITED STATES commemorative collection containing 33 different—10c. Approvals. White, 516-M Avenue L, Brooklyn 30, New York.

225 STAMPS FOR Only 10c! This mammoth value includes Airmails, Pictorials; stamps from strange Countries cataloguing up to 25c each! Also approvals. Mystic Stamp Company, Camden 30, N. Y.

COLLECTION 100 DIFFERENT United States stamps. Contains commemoratives, airmails, regular issues, high denominations, including some over 70 years old. Worth over $1.00 but our price only 20¢ with approvals. Sundman, Littleton T4, N. H.

WEIRD DIAMOND Shape Coffee Stamps. Lovely Flower Triangle! First American big commemorative. Greenland, Idol Dancer, etc. Free with approvals. Capital Stamp Co., Farrysburg 5, Mich.

GIGANTIC COLLECTION Free—Includes Triangles—Early United States—Animals—Commemoratives—British Colonies—High Value Pictorials, etc. Complete Collection plugs Big Illustrated Magazine all free. Send 5c for postage. Gray Stamp Company, Dept. MI, Toronto 5, Can.

FREE! GIANT Bargain Catalog—New Edition listing thousands of bargains including U. S. and B. N. A. stamps, packets, mixtures, albums, accessories and supplies; sent with beautiful approvals. Jamestown Stamp, Dept. E39MI, Jamestown, N. Y.

ALBUM ONLY 10¢! Hundreds of Spaces! Stampmart Company, Hartford 1, Conn.

TWO $5.00 U. S. Postage Stamps Free to approval buyers. Send dime for postage, details. Irwin Stamp Co., Box 11-65, Brooklyn 30, N. Y.

100 DIFFERENT BELGIUM Free. UPU, Brussels Fair. Railroad Stamps Free. Approval Applicants Only. Trylon, Box 179-M Forest Hills 75, N. Y.

105 DIFFERENT WORLDWIDE from Liberia, Macao, etc., cataloging over $2.75 only 10¢. Approvals. Goliath, Bethlehem, J4, N. H.

BET YOU haven't stamps from North West Pacific Islands! Absolutely free with approvals, elusive North West Pacific Islands stamp. Viking, Great Neck 115, N. Y.

427 STAMPS 10¢, CATALOGUE Value $10.00 Mystery Mixture including U.S., Ireland, Asia, Africa, Pictorials, Commemoratives, Air Mails. Worldostamps, 8203 Grubb MI, Silver Spring, Md.

FREE UNITED States catalog. H-S Company, 45MI Bromfield, Boston 8, Mass.

OLD SCARCE U. S. Seconds On Approval. Slight imperfections, lowest prices. Hernfelder, Clintonhill Sta., Newark 8, N. J.

1000 DIFFERENT STAMPS free to regular buyers from our price lists. No approvals. Write for details. Lucas Stamps, 612C White, Toledo 5, Ohio.

500 FINE MIXED U. S. 15¢. Wright, 201A Mealey, Hagerstown, Md.

14,000 DIFFERENT! AMAZING new plan builds your collection systematically, country by country. Only 50¢ weekly. Free details. L. G. Ware, Stepney 22, Conn.

FREE ILLUSTRATED U. S. catalog! Bailey, 45 Bromfield, Boston 8-M, Mass.

FREE—YOUR choice any volume Scott's Loose Leaf Deluxe $13.50 Albums, 1959 Scott $11.00 catalogue even worlds finest Master Global $18.75 Album Free when you buy our sensational Foreign Approvals. Bargain Stamps, Redlands, Calif.

FREE—YOUR choice of 100 different Canada, 100 different Philippines, or 100 different from 100 different countries, each collection over $5.00 catalogue value—when you buy our sensational foreign approvals. Topval, Box 486, Redlands, Calif.

200 DIFFERENT BELGIUM 50¢—Penny approvals included. Reed, Box 980, Chicago 90, Ill.

1000 DIFFERENT With approvals. Jacobsen, 4395 Broadway, New York 40, N. Y.

FREE 102 WORLDWIDE Stamp Assortment. Approvals. Send Dime for handling. Linstamp, St. Catharines 620, Ontario.

ECONOMICAL ½-3¢ APPROVALS. 33,000 varieties. Dresel, Box 128-B, West Englewood, N. J.

EXCITING "STRANGE countries" packet. Free with approvals! Saxon, Orange, Calif.

MI Classified Advertisements

100 OLD UNITED States between 1861 and 1935, $1.00. Roush Stamps, 51 Chestnut, Mansfield, Ohio.

800 MIXED U. S. various issues 25¢. Monjar, Fairmount, Cincinnati 14, Ohio.

FREE U. S. list for advanced collectors. National, Box 60, Boston 1, Mass.

508 DIFFERENT WORLDWIDE from Madagascar, Macao, Guinea, etc., cataloguing over $15 only 35¢. Approvals. Littleton Stamp Company, Littleton Q4, N. H.

TRADE YOUR Duplicates toward our approvals! (Foreign only.) Complete detailed information, 10¢. (Refundable.) Variety Stamp Service, Box 98-L, Newton Highlands 61, Mass.

60 DIFFERENT U.S. (30 Commemoratives) 25¢. No Approvals. Seidenberg, Appleton, Wisc.

FREE 40 EXOTIC Giant Pictorials! Free 144-stamp Worldwide Mix! Free Stamp Newspaper! Free Illustrated Bargain Lists! With approvals. Rush 10¢ for postage. Philatelics, Dept. V, New Paltz, N. Y.

FREE U. S. 64 page illustrated catalogue. Stone, 260 Washington St., Boston 8M, Mass.

FREE! NEWFOUNDLAND, Israel, Animals, Birds, Sports, Fipex; with approvals. Tropicana, Box 449-I, Hollywood, Fla.

PENNY APPROVALS! Regardless. Catalogue! Kloster, 4164 52nd St., San Diego 5, Calif.

SPECIAL! OLD U. S., flags, Famous Americans, Presidents, commemoratives with approvals plus free packet, 10¢ handling. Metropolitan Stamps, Box 312EX, Jackson Heights, N. Y.

WOW! 110 ALL Different Germany 10¢ Zeppelins, Semi-Postals, Airmails, High values, etc. Giant Catalog, bargain lists included with beautiful approvals. Jamestown Stamp, Dept. A39MI, Jamestown, N. Y.

BEAUTIES! PICTORIALS from Andorra, Iceland, Monaco, New Caledonia, Togo, San Marino, Singapore, etc., only 10¢. Approvals. Champlain, Isle La Motte, Vt.

U. S. STAMPS, Giant Bargain Catalog—15¢. Raymax, 35-VK Maidenlane, NYC 38.

THE GODS of Ancient Greece; Russia Sputnik; U. S. National Parks; Israel; U. N.; Sets; Packets; Surprises free with purchases. Approvals. Stamp Farm, 13-7, Oxford, Wisc.

25 DIFFERENT GREECE 5¢ to approval buyers. Wineholt, Woodbine 3, Penna.

• • • OLD STAMPS WANTED

I WILL Pay $100.00 each for 1924 1c green Franklin stamps, rotary perforated eleven (up to $1,000.00 each unused). Send 20c for large illustrated folders showing Amazing prices paid for old stamps and coins. Baker-Stamps, 203-MI-39, Oradell, N. J.

• • • OLD COINS WANTED

I'M BUYING Coins! New Higher Prices! My Confidential Buying Guide Only $1.00! Hubers, National Building, Minneapolis, Minn.

WANTED—1822—$5.00 GOLD pay $10,000.00. 1913 Liberty Head Nickel $4,000.00. 1894-S Dime $2,000.00. 1876-C. C. —20¢ Piece $2,000.00. 1901-S—Quarter $75.00-$600.00. 1922—50¢-$5.00-$75.00. 1928 Hawaiian 50¢—$95.00. 1885 Trade Dollar $1,500.00. Uncirculated Dollars 1804 to 1839, 1893-S, 1895-P, 1903-O—$100.00-$5,000.00. Certain Dates—Lincoln Cents—$125.00; Flying Eagle Cents—$500.00; Indian Cents—$175.00; Halfcents—$900.00; 2¢ Pieces—$125.00; 3¢ Pieces—$150.00; Halfdimes—$1,500.00; Dimes before 1943 —$500.00; Quarters before 1924—$1,500.00; Half Dollars before 1905—$3,000.00. Hundreds of others worth $10.00-$1,000.00. Canadian Coins, 1921—5¢ Silver—$100.00. 1889-Dimes — $100.00. 1875 Quarters — $100.00. 1921-50¢—$750.00. Wanted—Large Cents, Gold Coins, Paper Money, etc. Know their true value. Purchase Our Large Illustrated Guarantee Buying-Selling Catalogue giving complete allcoin information before sending coins to sell, price $1.00. Catalogue dollar refunded, $20.00 sale. Thousands of persons have sold us coins. Incorporated 1938. Worthycoin Corporation (K-203-C), Boston 8, Mass.

WE BUY U. S. Coins! Catalog, 50¢. Andy's, 2405-7th Ave., No. Billings, Mont.

• • • COIN COLLECTING

1959 PROOF SETS only $2.50! 1958—$3.00, 1957—$3.00, 1956—$4.00, 1955—$6.00, 1954—$7.00, 1953—$12.00, 1952—$18.00, 1951—$29.00, 1950—$47.00. Complete Set 1950-1959 inclusive only $125.00! Wow! Silver Dollars. Brilliant. Uncirculated. 1878-CC, 82-CC, 83-CC, 84-CC, only $3.00 each! 80-CC, 81-CC, 85-CC, 90-CC, 91-CC, only $4.00 each! 1878-S, 79-S, 80-S, 81-S, 82-S, 1921-S, 82-O, 83-O, 84-O, 85-O, 79-P, 83-P, 84-P, 85-P, 86-P, 87-P, 89-P, 90-P, 96-P, 97-P, 98-P, 1921-PM, 1922-P, 1923-P, 1924-P, 1925-P, 1921-D, only $1.50 each! Free, with your order, our new Price List! Everything Postpaid. 10-Day Money-Back Guarantee of Satisfaction. Thousands of other Coins in Stock. Gold. Silver Dollars. Cents. Etc. Postal Products Co. Fast Mail Order. Joe Gordon, 5414-L California Street, San Francisco 21, Calif.

COINS FROM Formosa, Vatican, etc., plus foreign banknote, 10¢ with coin approvals. Littleton Coin Company, Littleton 54, N. H.

INDIAN CENT plus Bargain Lists 10¢. Hutchinson's, Box 4747, Philadelphia 34, Penna.

TEN DIFFERENT Indian Cents $1.00; Free List. Collector's Bargains, Box 356G, New Hope, Penna.

RAREST CC mint dollar 1885 Uncirculated $5.00. Coin Catalogue 25¢. Shultz, Salt Lake City 10, Utah.

COLLECTORS ITEMS: United Nations Medallion, solid goldene bronze 1¼" diam. Front shows U.N. Buildings, Back U.N. Pledge. America's Famous Dollar that George Washington threw across Rappahannock! Piece of eight of pirate fame! Solid German silver. Buried Treasures Map—shows where now being recovered, also other locations . . . only $1.00 each, 3 for $2.75, 6 for $5.00 Ppd. Hano-1598 Third Ave., N. Y. 28 (Dealers wanted).

BARGAIN LISTS of U. S. coins, Indianhead cent 10¢. Economy Sales Company, Mansfield 3, Mass.

NEW! VALU-PACKED 1959 Bargain American Coin Catalog. Revised prices! Now only 25¢. Write! Sullivan's, 128GG East Fourth, St. Paul 1, Minn.

WORLD'S GREATEST Bargain Catalogue $1.00 (Deductible first $10.00 order). Brilliant Proof Sets—1958 $3.50; 1957 $3.15; 1956 $3.75; 1955 $5.65. Retail Guide book $1.75; Premium Handbook $1.00; World Coin Book $4.00. Bebee's, 4514 North 30th, Omaha 11, Neb.

SIXTEEN PAGE price list of USA and Canadian coins free. Selling prices on thousands of coins and supply items. Bryson, Inc., 612C White, Toledo 5, Ohio.

GENUINE UNITED States Wooden Nickel. Rare unusual collectors piece. $1.00. Supply limited. George Eck, Box 338, Mahopac, N. Y.

FLYING EAGLE plus large cent $2.00. Rhode, 105 Windsor, Reading, Penna.

32 PAGE DELUXE U. S. coin list 10¢. Stoney, 260 Washington St., Boston 8M, Mass.

• • • HOBBIES & COLLECTIONS

NAZI SWASTIKA Armband and Catalog, $1.00 Hobbies, Box 71D, Rockaway Park 94, N. Y.

• • • EDUCATION & INSTRUCTION

ENGINEERING DEGREES Earned through Home Study. Electronics, Electrical, Mechanical, Civil, Physics. When writing, specify course desired. Pacific International College of Arts and Sciences primarily a correspondence school. Resident classes also carried. 5719-F Santa Monica Blvd., Hollywood 38, Calif.

LEARN WHILE Asleep with your recorder, phonograph or amazing new "Electronic Educator" endless tape recorder. Details free. Research Association, Box 24-MM, Olympia, Wash.

LEARN APPLIANCE service and repair. Motors, washers, refrigeration, cleaners, everything. Free booklet. Appliance, 11027 South Vermont, Los Angeles 44.

COMPLETE YOUR High School at home in spare time with 62-year-old school. Texts furnished. No classes. Diploma. Information booklet free. American School, Dept. X328, Drexel at 58th, Chicago 37, Ill.

BOOKKEEPERS! INCREASE your earnings! Operate your own simplified "Dollar-A-Week" Bookkeeping and Tax Service. Full or spare time. Details Free. No obligation. Ellis, Box 202, Cedar Grove, N. C.

PIANO TUNING Pays. Big money in spare time. Learn at home in 30 days. No musical knowledge necessary. Phonograph, records, tools and instructions furnished. Personal instructions available. Free catalog. Capital Tuning School, 3168 S.W. 16th Court, Ft. Lauderdale, Fla.

HIGH SCHOOL Diploma at home. Licensed teachers. Approved materials. Southern States Academy, Station E-13, Atlanta, Ga.

USED CORRESPONDENCE Courses and Books sold and rented. Money back guarantee. Catalog free. (Courses Bought). Lee Mountain, Pisgah, Ala.

WANT A Diesel job? New opportunities to increase income. Higher pay. More money. We can help you qualify. Tools. Shop method home training. Write today! Diesel Tractor, Heavy Equipment Division, Interstate Training Service, Dept. B-4, Portland 13, Ore.

LEARN MINERALOGY and Lapidary art at home. Diploma course. Earn Big Profits making costume jewelry. Free catalog. Mineral Science Institute, Desk 17, 159 East Ontario, Chicago 11.

LEARN CIVIL and criminal investigation at home. Earn steady good pay. Institute Applied Science, 1920 Sunnyside, Dept. 213, Chicago 40, Ill.

DIESEL! LEARN to install, operate and maintain all type engines—spare time. Write for Free Book. Utilities Diesel Training, Dept. DJ-58, 2521 Sheffield, Chicago 14.

HIGH SCHOOL—No Classes. Study at home. Spare Time. Diploma awarded. Write for Free Catalog HAJ-83, Wayne School, 2527 Sheffield, Chicago 14, Ill.

BOOKS, FREE General Catalog, 100 pages. Text, vocational, educational, instructional subjects. Millions of volumes, new and used. Bargain prices. Books bought. Est. 1902, Long's College Book Co., Dept. MI, Columbus 1, Ohio.

10,000 PROSPECTORS WANTED! Be a professional mineral prospector. Make your fortune. 25 illustrated lessons; large mineral specimens. Teaches everything you must know. Free Literature. Exploration, Box 172, Nelson, B. C., Can.

LEARN MATHEMATICS At Home. Technical Training Service, Box 146, Bath Beach, Brooklyn 14, N. Y.

1959 INDUSTRY TRAINING. Home-Study. Drafting, Design, Electronics. Aero Tech, 2166 Sunset Blvd., Los Angeles 26, Calif.

APTITUDE TESTING. Information Free. Guidance Associates, 115E Haypath Road, Plainview, L. I.

NEED DEGREE? Trinity College offers all college subjects correspondence bachelor's, master's, doctor's degree $100. 111 Mapes Avenue, Newark 12, N. J.

COMPARISON TESTS. Compare your scores to others. Geography, History, Math, General Mechanics, Vocabulary. Send only $10.00 (for all tests). Check or money order to BBB Test Lab, Box 638, Minneapolis, Minn. It pays to know.

WELDERS EARN big money. Easy to learn Arc—Gas—Automatic Welding. Non-profit school—low tuition, GI approved. Free booklet. Hobart Welding School, Box SM-392, Troy, Ohio.

PHYSICAL THERAPY and massage pays big profits. Learn at home. Free catalogue. National Institute, Desk 2, 159 E. Ontario, Chicago, Ill.

MASTER WATCHMAKING at home. Free sample lesson. Chicago School, 2328-TP Milwaukee, Chicago 47.

• • • ACCIDENT INVESTIGATOR TRAINING

INVESTIGATE ACCIDENTS—Earn $750 to $1,000 monthly. Thousands of airlines, insurance companies, steamship lines urgently need Accident Investigators. Make excellent full time or spare time income. Free Book! No obligation. GI Approved. Write: Universal Schools, V-3, Box 8202, Dallas 5, Texas.

• • • BOOKS, PERIODICALS

DISPOSAL SALE: 12 books $1. Interesting mail. Samples—something different—and amazing booklet 30¢. Persil, 436 N.Y. Ave., Brooklyn 25, N.Y.

BOOKHUNTERS! All Subjects. Send Wants! Jaher Book Service, 183-M Hazelwood Drive, Westbury, N. Y.

UNUSUAL BOOKS, etc. 14—Rare illustrated booklets $1.00. Interesting catalog 10¢. Aladdin Book Co., 210-MI 5th Ave., New York City.

• • • RADIO, TELEVISION, HI-FI SUPPLIES & INSTRUCTION

FIX YOUR Own TV The Easy Way, and Save 80%! Send 10¢ for new, illustrated TV Trouble Shooter Chart showing which tubes to replace, for All common TV picture troubles. We'll include latest Wholesale Tube Price List Free. Zalytron Tube Corp., Dept. MI, 220 West 42nd Street, New York City.

• • • MUSICAL INSTRUCTION

SONGS INTO $$$$$$$$$$$$—Share $33 million dollars yearly for New Songwriters, songpoets. Any subject, songs composed, published, promoted by largest firm. Information, appraisal Free. Send Nordyke Music Publishers, 6000 Sunset, Hollywood 28M, Calif.

POEMS WANTED for musical setting and recording. Send poems. Free examination. Crown Music Company, 49-M West 32 Street, New York 1.

SONGPOEMS AND lyrics wanted. Mail to: TinPan Alley, Inc., 1650 Broadway, New York 19, N. Y.

SONGWRITERS: RECORDING company wants new songs. Royalty basis. National sales, promotion if selected. No charge for melodies. Send material. Music Makers, Dept. B-48, Box 2507, Hollywood, Calif.

POEMS WANTED for musical setting and recording by America's Largest Song Studio. Send poems. Free examination. Five Star Music Masters, 629 Beacon Building, Boston.

SONGWRITERS — OUTSTANDING, ethical offer. Hibbeler, C-32, 6808 Oleander, Chicago 31, Ill.

• • • MUSICAL INSTRUMENTS

ACCORDIONS—SAVE up to 75%. Home trial. Trades accepted. Free catalog. Accordion Warehouse, Box MX, 2003 Chicago, Chicago 22.

1959 ACCORDIONS WHOLESALE—10 day trial. Free catalog. American Accordion Center, Dept. MI-39, 5329 Belmont, Chicago.

• • • AUTHOR SERVICE

WANTED: BOOK MANUSCRIPTS—all subjects considered. Greenwich Book Pub. (Atten. Mr. Zorn.) 489 Fifth Ave., N. Y. C.

• • • CARTOONING

CARTOON YOUR way to success! Internationally known instructor, Raye Burns, will personally teach you to create original, salable cartoons at home. Cost of Course is very low. Write for free details. Raye Burns School, Box 3583-M, Cleveland 18, Ohio.

"HOW TO Make Money With Simple Cartoons"—A book everyone who likes to draw should have. It is free; no obligation. Simply address Cartoonists' Exchange, Dept. 353, Pleasant Hill, Ohio.

• • • ARTIST SUPPLIES & INSTRUCTION

LEARN SIGN Painting at home. Free talent test. Ben Kerns, Box 812-M, Greenville, S. C.

• • • MAGIC TRICKS, JOKES, PUZZLES

500 TRICKS, DOUGLAS famous catalog just 10¢. This book of 120 pages describes magic tricks for pocket, parlor and stage. Magicians, both professional and amateur depend on Douglas for fastest service. Amaze your friends—send 10¢ today. Douglas Magicland, Dept. T, Dallas, Texas.

WORLD'S FINEST professional magic. Joker novelties. Giant illustrated catalog 10¢. Top Hat, Evanston 14, Ill.

3100 NOVELTIES, JOKES, tricks, gadgets, funmakers, hobbies. Big catalog 10c. Johnson-Smith, D-492, Detroit 7.

NOVELTIES, TRICKS Magic. Free price list. Behnke Sales, Box 273, Temple City, Calif.

• • • HYPNOTISM

STUDY HYPNOTISM! Amazing illustrated lessons. Big 280-page treatise jampacked with fascinating information. Simple understandable language you'll enjoy. Full price only $3.95 postpaid—or C O D plus postage. Satisfaction or refund guaranteed. Order "Hypnotism" today. Nelson Company, 210 South Clinton, Dept. 2CR-3, Chicago 6.

FREE ILLUSTRATED Hypnotism, Self-hypnosis catalogue. Write: Hypnotist, 8721 Sunset Blvd., Hollywood 46M, Calif.

HYPNOTIZE SUCCESSFULLY! Learn Easy, Fast, Modern Methods. Complete, Illustrated Course, including self-hypnosis and "Secret Nerve Pressure Technique" (Guaranteed Harmless)—$1.00. H. Fowler, 851 Draper Ave., Schenectady 6, New York.

HYPNOTIZE SELF, Others while asleep with amazing hypnotic phonograph records, tapes. Catalog free. Research Association, Box 24-M, Olympia, Wash.

"SELF-HYPNOSIS. LIMB-BY-LIMB Self-Trance Induction Technique." $2. Hypnomaster, 846-59 Sunnyside, Chicago 40.

EARN BRITISH College Diploma. Psychotherapy, Hypnology. Join Association. Aurear, Central Valley, N. Y.

• • • VENTRILOQUISM

LEARN VENTRILOQUISM easiest method. Details free. Dept. 250, Smith, 2125 North Bigelow, Peoria, Ill.

• • • CHALK TALKS

TRICK CHALK Stunts. Catalog 10c. Cartoonist John Balda, Oshkosh, Wis.

• • • DETECTIVES

DETECTIVES—WORK home-travel. Experience unnecessary. Detective Particulars free. Write, George Wagoner, J-125 West 86th, New York 24.

DETECTIVE TRAINING. Phillips Secret Service System, 1917-G North Kenneth, Chicago 39, Ill.

PROFESSIONAL INVESTIGATORS Training School. Badge, diploma, future. Box 41197, Los Angeles 41, Calif.

• • • TATTOOING

LEARN PROFITABLE, fascinating Tattooing. Illustrated information $1. Zeis, 728-F Leslie, Rockford, Ill.

MI Classified Advertisements

• • • CAMERAS & PHOTO SUPPLIES

PHOTOGRAPHY FOR Pleasure or profit. Learn at home. Practical basic training. Long established school. Free booklet. American School of Photography, 835 Diversey Parkway, Dept. 2041, Chicago 14, Ill.

OIL COLORING Photographs—A fascinating hobby or profitable sideline for those with artistic talent. Learn at home. Easy simplified method. Free booklet. National Photo Coloring School, 835 Diversey Parkway, Dept. 2043, Chicago 14.

BUY CAMERAS, supplies wholesale, save up to 40%, all leading brands. Argus Matchmatic C3 outfit $52.10 (list $74.95). Send for free price list now. East Coast Photo Suppliers, 516 5th Ave., New York 36, N. Y.

FREE! 72 PAGE photographic bargain catalog. Dept. 3-A2, Central Camera Company, 230 S. Wabash Ave., Chicago, Ill.

• • • DEVELOPING, PRINTING & FINISHING

FREE CATALOG postpaid printing rubber stamps. DM Press, Sebastopol, Calif.

• • • MOTION PICTURES & SOUND EQUIPMENT

FREE! BLACKHAWK'S big sale catalog 8mm., 16mm. movies, 2"x2" color slides. Biggest selection anywhere! Projectors, cameras, supplies—big discounts! Get free, every three weeks, 12-page newspaper size bargain list! Blackhawk Films, Davenport 16, Iowa.

TAPE recorders, Hi-Fi components, Sleep Learning Equipment, etc., tapes. Unusual values. Free catalog. Dressner, 69-92L 174 Street, Flushing 65, N. Y.

RECORDERS, HI-FI. Free Wholesale Catalogue. Carston, 215-V East 88, N.Y.C. 28.

5,000 8-16MM. SILENT-SOUND Films. Photographic equipment. International, Greenvale, N. Y.

• • • HOME MOVIES

8MM HOME Movies, Special Offer. Regular $1.95, 50 ft. $1.00. Science, Cartoons, Travel, Animals, Comedies. Send $1.00. Movieland, Box 10-B, Van Nuys, Calif.

FREE CATALOG. Save $$$. Fresh 8mm, 16mm B&W and color film. Home processing equipment. Superior Bulk Film Company, 442-446 No. Wells, Chicago 10.

ROSE PARADE 1959 in COLOR, 8mm 50' Special $4.95. Complete Parade 200' $17.50. Finest Photography. Rose Parade Movies, Box 108, Van Nuys, Calif.

MOVIE FILM! Free catalog! ESO-L, 47th Holly, Kansas City 12, Mo.

• • • AUTOMOBILES & MIDGET CARS

HUNDREDS OF automobile catalogs—American, antique, foreign; dealer books, glossy photographs, shop manuals; free motor magazines listed with non-profit organization. Write immediately; get on free mailing list. Auto Maniacs, Stockbridge, Mich.

FIBERGLAS SPORTS Bodies — Bolts on your chassis. $295. Free Literature. Almquist Engineering, Milford MI2, Penna.

MIDGET CAR, plans and price list of parts, 35c. M. Sypher Co., Station F, Toledo, Ohio.

FULL COLOR post card photos of antique and classic cars. 25 for $1, specify series 1, 2, 3, or 4 (all different). Free list. L. I. Auto Museum, Southampton, N. Y.

• • • HOT RODS

HOT CAR Racer—$129.00 up. 2 to 4 hp. Wheel options. Free folder. Dept. 43, Box 9405, Richmond 28, Va.

• • • AUTO SUPPLIES & EQUIPMENT

1959 EDITION. IT'S New! It's different! Get world's largest auto accessories and parts catalog, save up to 50%. 308 pages, over 85,000 items for 1920 to 1959 models including Hollywood accessories, custom styling and Hi-Speed Equipment. All parts and accessories for all cars and trucks. We have that hard to get part. Jam packed with bargains. Completely illustrated. Send 25¢ (refundable). J. C. Whitney, M3, Archer, Chicago 16, Ill.

FREE! NEW Catalog—Speed, Power, Mileage Increasing Equipment. Discounts! Almquist Engineering, Milford MI5, Penna.

1959 GIANT AUTO Parts Catalog. Thousands Accessories Stores Don't Handle . . . Gadgets, Custom Equipment. Send 25¢ (Refundable). Newhouse Automotive Industries, 5805 MI-3 Beverly, Los Angeles 22, Calif.

AMAZING DISCOVERY, Master Glaze, puts brilliant glass like surface on cars. Free Sample, information. Big commissions, Master Glaze, Dept. 905, 7720 Harwood, Milwaukee, Wisc.

FORD "T" PARTS headquarters. Free catalog. Ernie Hemmings, Quincy, Ill.

200 MILES PER gallon. Illustrated patent story How It's Done. For fun or profit send $2.00 to Scieleco, Box 12-MI, Wickliffe, Ohio.

AUTO SHOP welding repair training in world's largest non-profit welding school. Low tuition. Free booklet. Hobart Welders, Box SM-391, Troy, Ohio.

RING-VALVE JOB while driving, $4.00. Literature. Motaloy, Grantham 2, Penna.

• • • AVIATION

AIRCRAFT DATA Book. The most asked questions answered. Jam-packed with photos, drawings, information on the homebuilt and sport plane movement $1.50. Aircraft Builders Manuals. $1.25 and $2.50. Sport Aviation subscription. $5.00. Free brochure. Write Experimental Aircraft Association, Hales Corners, Wisc.

PROPELLERS, PLANS, supplies for airboats and snowplanes. Catalog 25¢. Banks-Maxwell, Box 3301D, Ft. Worth 5, Texas.

AVIATION SURPLUS bargain catalogue. One dime. Box 22MX9, Thomasville, Penna.

• • • MOTORCYCLES, BICYCLES MOTOR SCOOTERS

RECONDITIONED MOTORCYCLES and motors. Chromium accessories. Complete stock Indian parts. Expert rebuilding. Fast service. Indian Motorcycle Sales, Kansas City 27, Mo.

NSU SCOOTERS and motorcycles, BMW motorcycles, 2 to 35 HP, shaftdrive and chaindrive. Butler & Smith, P.O.B. 45, New York 24.

DOODLEBUG MOTORSCOOTER $35, Servicycle $18, Midget Car $45, Whizzer Motorbike, 2 extra engines $50, Electric outboard $5, engines $2.50 up. (Mail-order only.) Send 25¢ (35¢ for First Class Mailing) for Directory-Catalogue Number 88 just out, listing these and hundreds of other bargains in midget cars, motorscooters, homebuilders parts, plans, etc. Midget Motors Directory, Athens, Ohio.

• • • JET PROPULSION & ROCKETS

ROCKET AMATEUR'S Guidebook. Sources for rocket kits, plans, supplies, valuable free handbooks, safety rules, legal regulations, magazines, university courses. Plus club list. $1.00. Space Products, Dept MI-2, 38 E. 57th St., New York 22, N. Y.

NEW ROCKET plans with illustrated catalog of tubes, nose cones, fuel materials, etc. 25¢ (refundable). Central Rocket Company, Waupaca, Wisc.

ROCKETS, FUSES, solid propellent. Easily made, complete instructions. $1.00. Rocket-Craft, P. O. Box 13, Pottsville, Penna.

• • • ENGINES, MOTORS

DIESEL INJECTOR parts wanted. GM51-71-110. Packard, 7120 Carnegie, Cleveland 3, Ohio.

• • • ELECTRICITY & ELECTRICAL SUPPLIES

REPLACEMENT PARTS, all Rectifiers, DC Power Supplies. Build-it-yourself kits for all applications. Electrical Division, 1624-L East First, Los Angeles 33, Calif.

APPLIANCE PARTS Wholesale. Catalogue 25¢. Sielco, 26 South 20 Street, Birmingham 3, Ala.

CONDUIT BENDING Hints, job guides list; Free. Pal-Notes, Underwood, N. Dak.

• • • MACHINERY, TOOLS & SUPPLIES

SIMPLE NEEDLELIKE chisel replaces needle in your sewing machine to cut light wood, leather, cardboard, etc. Precision cutting including perfect circles. Safe, no waste or dust. Perfect for Cub Scout projections. Introductory offer two chisels, $1. postpaid. Sewing Machine Chisel, East McKeesport 2, Penna.

POWERED PORTABLE concrete and mortar mixer. Free literature. Beran Manufacturing Company, 906 Dullnig, San Antonio 10, Texas.

ELECTRIC PENCIL: Engraves all Metals, $2.00. Beyer Mfg., 10511-G Springfield, Chicago 43.

PIPEFITTERS—PREFECTED "Dial" calculator consisting of instant calculations of cut back of miter, saddle, "y" cuts on pipe size from 2" to 48". Guaranteed accurate. Price $3.00. Dial-A-Cut, P. O. Box 1532, Savannah, Ga.

12" SHEET-METAL BRAKE. Handles 24 gauge, narrower pieces to 18 gauge. $9.85 postpaid. H. L. Barnes, 1406 West Lake, Minneapolis, Minn.

½HP. BENCH Grinder. New Design for Home and Shop. $32.75. Send for Descriptive Bulletin. Maple Engineering Co., Box 9044, Maple Heights 37, Ohio.

"MACHINE TOOL Reconditioning & the Art of Hand Scrapping"—Illustrated manual for machinists. Third printing. Free circular. Machine Tool Publications, 215-M Commerce Building, St. Paul 1, Minn.

• • • WELDING, PLATING & SOLDERING

FREE CATALOG, welders, welding kits. Build 350-ampere welder using aircraft generator, plans 25¢. Agents wanted. Dunbar Manufacturing, Minneapolis 8, Minn.

FREE FACTORY catalog. Welders, package kits. Build 350 ampere welder at low cost. Guaranteed plans 25¢. LeJay Manufacturing Company, Asheville, N.C.

WELDERS, 110/230, WELDS 1/2", $39.50. Morris, 1070 Inner Drive, Schenectady 3, N. Y.

• • • BATTERIES

LOOK! BATTERY Repair Manual $3.00. Bayer, 938X Betty, Neenah, Wisc.

• • • MANUFACTURING

EXPERIMENTAL WORK, Precision Machining. Henry Herman, 350 Hewes, Brooklyn 11, N. Y.

• • • INVENTIONS WANTED

INVENTORS: HUNDREDS of manufacturers have requested our assistance in locating marketable new products. Complete information, free. Institute of American Inventors, Dept. 50 C, 635 F Street N. W., Washington 4, D. C.

INVENTORS . . . TURN your talents into immediate cash! Join Inventors of America. Write National Headquarters, 3136-C Sylvania Avenue, Toledo 13, Ohio.

INVENTORS—DON'T sell your invention until you receive our offer. Write Cowgill, Box 298, Marion, Ohio.

INVENTIONS WANTED. All types. Tremendous manufacturers lists. Global Marketing Service, 2420 77th, Oakland 5, Calif.

INVENTIONS NEEDED immediately for manufacturers. For additional information write Kessler Corporation, 63-IW, Fremont, Ohio.

INVENTIONS WANTED: "Patented"—"Patent Pending." 28 years experience Promoting Inventions. National Service Bureau, 3126 Meramec, St. Louis 18, Mo.

INVENTIONS BOUGHT and sold. Write "your I.D.E.A., Incorporated," Box 8627, Oklahoma City, Okla. Bonded and licensed.

MANUFACTURERS WANTING new inventions, royalty basis. Brown, 141-M, Broadway, New York City.

INVENTIONS WANTED Now by my manufacturer-clients. Write Adams, Invention Broker, 80-N Wall Street, Financial District, New York City.

WE MARKET worthwhile inventions and ideas. Harvey Consultants, Cambridge, Md.

• • • FOR INVENTORS

INVENTORS: LEARN how you can protect your invention. A specially prepared booklet "Patent Guide for the Inventor" containing detailed information concerning patent protection and procedure together with "Record of Invention" form will be promptly forwarded to you upon request—without obligation. We are registered to practice before the United States Patent Office and are prepared to serve you in the handling of your patent matters. Clarence A. O'Brien & Harvey Jacobson, Registered Patent Attorneys, 93A-A District National Building, Washington, D. C.

INVENTIONS PAY inventors when designed for profitable sales and effective patent control. I secure valuable patents at low definite fees; 30 years experience. Searches $15. Joseph O'Brien, Patent-Development Engineer, 132 Nassau Street, New York 38, N. Y.

INVENTORS—DON'T sell your invention until you receive our offer. Write Cowgill, Box 298, Marion, Ohio.

INVENTORS—SEND for free patent information book and inventor's record. Registered Patent Attorney, Associate Examiner, Patent Office 1922-29; Patent Attorney & Advisor, Navy Department 1930-47. Gustave Miller, 39MII Warner Building, Washington 4, D. C.

INVENTION RECORD form free and "Patent Information Every Inventor Should Have." Carl Miller, Registered Patent Attorney, Woolworth Building, New York.

INVENTORS: NEED Help? Write Institute of American Inventors, Dept. 50T, 635 F St., N. W., Washington 4, D. C.

INVENTORS—IF you believe that you have an invention, you should find out how to protect it. The firm of McMorrow, Berman & Davidson is qualified to take the necessary steps for you. Send for copy of our Patent Booklet "How to Protect Your Invention" and "Invention Record" form. No obligation. McMorrow, Berman & Davidson, Registered Patent Attorneys, 138-W Victor Building, Washington 1, D. C.

INVENTORS—THIS firm is registered to practice before the United States Patent Office and available to assist you in the preparation and prosecution of your patent application. "Patent Protection for Inventors" booklet containing detailed information and steps to take toward patent protection sent promptly upon request. No obligation. Victor J. Evans & Co., 570-C Merlin Building, Washington 6, D. C.

HIGHEST PROFITS paid. New inventions wanted. Brown, 141-N, Broadway, New York City.

WE HAVE markets if you have ideas. Harvey Consultants, Cambridge 1, Md.

INVENTIONS WANTED Now by my manufacturer-clients. Write Adams, Invention Broker, 80-H Wall Street, Financial District, New York City.

INVENTORS:—WHERE To Offer Your Invention, Particulars from Location Service Bureau, Box 37A, Almond, Wisc.

"INVENTOR'S GUIDE" sent free. Frank M. Ledermann, 154 Nassau Street, New York 38, N. Y.

• • • PATENT ATTORNEYS

INVENTORS—IF you believe that you have an invention, you should find out how to protect it. The firm of McMorrow, Berman & Davidson is qualified to take the necessary steps for you. Send for copy of our Patent Booklet "How to Protect Your Invention" and "Invention Record" form. No obligation. McMorrow, Berman & Davidson, Registered Patent Attorneys, 138-X Victor Building, Washington 1, D. C.

INVENTORS: INFORMATION on patent procedure furnished on request, without obligation. John Randolph, Registered Patent Attorney, 810 Victor Building, Washington 1, D. C.

INVENTION RECORD form free and "Patent Information Every Inventor Should Have." Carl Miller, Registered Patent Attorney, Woolworth Building, New York.

"INVENTOR'S GUIDE" and "Record of Invention" free on request. Frank M. Ledermann, 154 Nassau Street, New York City.

C. A. SNOW & CO., 1-427 Snow Bldg., Washington 1, D. C. Registered patent attorneys. Literature mailed on request.

INVENTORS—TAKE these preliminary steps toward patent protection. Sketch and describe your invention. Sign, date and have this disclosure witnessed by two people who understand your invention. Have us make a preliminary search among U.S. patents already granted for similar types of invention. We report on the probable patentability of your invention and recommend your further course of action. Write for our instructive booklet, "Patent Protection for Inventors" and convenient "Evidence of Invention" disclosure form. Victor J. Evans & Co., 571-C Merlin Building, Washington 6, D. C.

INVENTORS: LEARN how to protect your invention. Unless the inventor is familiar with patent matters, he should engage a competent registered patent attorney or agent to represent him. We are registered to practice before the U.S. Patent Office and prepared to serve you in handling your patent matters. "Patent Guide for the Inventor" containing detailed information concerning patent protection and procedure with "Record of Invention" form will be forwarded to you upon request—without obligation. Clarence A. O'Brien & Harvey Jacobson, Registered Patent Attorneys, 93B-A District National Building, Washington, D. C.

• • • BUILD IT YOURSELF

RIDING GARDEN Tractor, cultivator attachment, blueprints, send $2.00. M. Martin, Dept. AI, Martindale, Penna.

• • • HOME CRAFTSMEN

NEW BIG illustrated catalog. Supplies for Leathercraft, Metalcraft and numerous small inexpensive crafts. Prompt shipments. Top values. Latest ideas. Send 10¢ today to J. C. Larson Co., Dept. 8517, 820 S. Tripp, Chicago 24.

BUY PICTURE Frame moldings at wholesale. Actually less than cost of raw lumber. All styles and widths. Free Delivery. Write for price list. Chesapeake Picture Frame Makers, Box 533, Baltimore 3, Md.

WOODWORKING AND Cabinetmaking course for beginning and advanced home craftsmen. Only complete low-cost home training program available. Write for free booklet. Interstate Training Service, Dept. G-4, Portland 13, Ore.

FREE "DO-IT-YOURSELF" Leathercraft catalog. Tandy Leather Company, Box 791—R28, Fort Worth, Texas.

FREE LEATHERCRAFT Catalog. Quality Kits, Leathers, Tools. Handicrafters, Box 427, Montrose, Calif.

101 PATTERNS OF smart Gifts, Novelties, Shelves, Action windmills plus "Make Money Jig Sawing." $1.00. Mastercraft, 35X, 7041 Olcott, Chicago 31.

2430 ARTIST-DRAWN PATTERNS, new catalog 10¢. Craftplans, 1322-K Wabash, Chicago 5.

62 LAWN AND Novelty Patterns $1.00. Six wall shelves, buck, doe, fawns $2.00. Strother, Belington 5, W. Va.

KNOCKDOWN CEDAR chests, also over fifty kits. Catalog 25¢. Giles-Kendall Co., Huntsville 1, Ala.

MI Classified Advertisements

LEARN ART Metalcraft and jewelry making. Complete, inexpensive, home training course now available. Special tools and materials furnished. Write for free booklet. Interstate Training Service, Dept. L-4, Portland 13, Ore.

BEAUTIFUL KNOCKDOWN Cedar Chests. Free price list. Bedford Lumber Company, Shelbyville, Tenn.

• • • FOR THE HOME

WEATHERVANES, CUPOLAS, Yard Numbers, Post Signs, Estate Signs; Free Catalog. Home Industries, 330 Athens Street, Jackson, Ohio.

FOAM RUBBER Furniture Cushions—Factory seconds 50% discount. Free catalogue. Perma-Foam, 390-8 Nye Avenue, Irvington, N. J.

• • • MODELS & MODEL SUPPLIES

"POWER DRIVES Handbook"—36 pages illustrating many types motor drives for model autos, boats, displays, turntables, etc. Mail 25¢ cash, refundable first order $3.00 or more. Wilson's of Cleveland, Dept. MI, 425 Lakeside N. W., Cleveland 13, Ohio.

SCALE MODEL Materials for building model homes and architectural buildings of any type, ¼" and ⅛" scale. Send 25¢ for catalog. A & B Model Builders, Dept. M, 454 Donovan Road, Kansas City, Kans.

SHIP MODEL kits, and plans, clippers, fishermen, frigates, privateer, etc. 1959 catalog 25¢. Model Shipways, Box 85-M, Bogota, N. J.

• • • PLASTICS

NEW DO-IT-YOURSELF casting & molding Plastics! No Experience or Machinery Necessary. Send 25¢ for Big 64 page Catalog listing Hundreds of materials, molds, complete outfits & accessories. Castacraft Corp., Dept. C-32, P. O. Box 555, Palo Alto, Calif.

NEW LIQUID casting plastic, clear, colors. Embed real flowers, butterflies, photos, coins. Send 25¢ for two handbooks "How to Cast Liquid Plastics" and "How to Make Extra Money at Home." Castolite, Dept. C-104, Woodstock, Ill.

LEARN PLASTICS Fabrication for spare time income. Low cost home training now available. Write for free booklet. Interstate Training Service, Dept. D-4, Portland 13, Ore.

• • • FOR SPORTSMEN

SAMPLE: 25¢ COPY of "The Archers' Magazine." Send 10¢: 1200 Walnut Street, Philadelphia 7, Penna.

FREE CATALOG: Western Wear, Saddles, Boots, Leather Suplies. Silver Spur, Box 1785-X5, Fort Worth, Texas.

• • • BOATS, OUTBOARD MOTORS

FULL SIZE, shape-cut boat patterns, blueprints, 7½-38 feet. Send 50¢ for 88-page illustrated "Build a Boat" catalog of all types, Naval-architect-designed, boats. "How to Build a Boat" booklet, $2.50. "Hardware & Equipment," $2.00. Cleveland Boat Blueprints, Dept. A-23, Box 1651, Cleveland, Ohio.

MARINE CONVERSIONS. Ford, Chevrolet V8, Jeep engines. Catalog 25¢. Lehman Manufacturing Company, 800 Elizabeth Ave., Linden 3, N. J.

BUILD BOY Size Air Boat. Plans $1.00. Hawk, 1821 Florida, N. E., Albuquerque, N. M.

NEW, USED, rebuilt marine motors. Marine conversions, fittings. Free catalog. Stokes Marine Supply, Dept. 21, Coldwater, Mich.

FREE CATALOG! Boat Kits, Trailers, Fiberglas, Marine Hardware. Luger Industries, Dept. P-3, 9200 Access Road, Minneapolis 20, Minnesota.

BOAT PLANS—Full Size Patterns—Frame Kits. Modern Inboards and Outboards for amateur builders. Complete New Catalog 50¢ or specify requirements. Designs, 9152 Rosecrans, Bellflower, Calif.

SAVE! SAVE! Save! World's Finest Boat Kits—25% less! Satisfaction Guaranteed! Write for free color catalog. Dept. MIM-359, Taft Marine Woodcraft, 636 39th Ave., N. E., Minneapolis, Minn.

• • • SPORTING GOODS

5,000 BARGAINS, FIREARMS, binoculars, war relics. Catalog 50c. Smith Armory, Runnemede, N. J.

• • • BINOCULARS, TELESCOPES, MICROSCOPES

WAR SURPLUS Bargains: Millions of lenses, instruments, telescopes, binoculars, components and complete line of astronomical telescope items. World's greatest optical market-place! Send only $1.00 for beginner's 10-lens Kit and big instruction booklet Stock 2-CB. Write for Catalog CB Free! Edmund Scientific Co., Barrington, N. J.

BUILD YOUR own Reflector Telescopes, complete kits: Mirrors, Eyepieces, Tripods, all other accessories. Request free illustrated literature. Criterion Manufacturing, Dept. KM 49, Hartford, Conn.

REFLECTING TELESCOPES, 60X completely assembled. Guaranteed observatory clearness. Free information. Skyscope, P.O. Box 55, Brooklyn 28, New York.

"FREE" CATALOGUE! Thousand war surplus optical bargains. Lenses, Prisms, Telescopes, Binoculars, etc. Send $1.00 for 10 lens Hobbyist Set and Project booklet. R. Jaegers, 691 West Merrick Road, Lynbrook, N. Y.

REFLECTOR TELESCOPES from Esco. Assembled and do-it-yourself telescopes from $7.50 (3") to $175 (12"). Complete line of optics and accessories. See display ad this issue. Send for free illustrated booklet. Esco Products, Oak Ridge, N. J.

TELESCOPES—REFRACTOR, reflector, kits and accessories. Free illustrated booklet. Dell Optics Co., Limited, Dept. MI, 329 55th Street, West New York, New Jersey.

TELESCOPES, BINOCULARS—all sizes. Complete optics, parts, accessories for telescopes. Free illustrated catalog. Suffolk Science, Mattituck, N. Y.

DYNASCOPES—SENSATIONAL New Reflector Telescopes. Send for details. Criterion Co., Dept. DM 67, Hartford, Conn.

• • • BODY BUILDING—ATHLETIC EQUIPMENT

BREAK PLANKS, masonry bare-handed with Karate, Kung-Fu, deadliest oriental defense—illustrated training manual $3.98. J. Yim Lee, 584 Valle Vista Ave., Oakland 10, Calif.

BARBELL COURSE, thoroughly explained, illustrated $1.00. Catalogue 10¢. Good Barbell, Siloam Springs, Ark.

FREE MUSCLE building information. Bodytone, Box 638-C, North Miami, Fla.

• • • REAL ESTATE, FARM LANDS

$10 DOWN, $10 MONTHLY buys your homesite in Central Florida's finest retirement and vacation community in the high ridge section near Sebring. On 84 square mile Highlands Lake. Free community parks and beaches. Get Free color brochures, house plans; learn how we help you plan, finance, build your low cost, tax-exempt home. Write Florida Realty Bureau, Inc., Dept. EI, Lake Placid, Fla.

SOUTHERN CALIFORNIA Level lots. In path of growth—Streets—Utilities—$390—$10 month. For information. Write Bill Jones Realty, 13768 Erwin, Van Nuys, Calif.

FREE FLORIDA Silver Springs Ocala Folder. Improved Homesites Ready to Build. $595.00. $10.00 Month. Write Silver Springs Land, 366 W1 Eight Mile, Detroit 20, Mich.

FLORIDA'S BIGGEST Lot Value! No Money Down! $5 monthly. Full price only $133. Between Orlando and Ocala. High, dry, adjoining city, streets, electricity, phones, churches, schools, shopping. In heart of 3000 lakes. World's best fishing! Write for Free photos. Arlen Huysman, Box 467, Belleview, Fla.

FLORIDA—NICE homesites, $345 at $10 monthly. Folder Free. Winston Vernor. DeLand, Fla.

• • • PLANTS, SHRUBS & TREES

RAISE YOUR Shrubs, trees from seed. Free Planting guide, price list. Woodlot Seed Co., Norway 23, Mich.

GINSENG, GOLDENSEAL. Roots bring up to $14 pound. Full information. F. L. Collins, Viola, Iowa.

• • • HORSE TRAINING

"HOW TO Train Horses"—A book everyone who likes horses or ponies should have. Free. No obligation. Simply address Beery School of Horsemanship, Dept. 1153, Pleasant Hill, Ohio.

• • • RABBITS—HAMSTERS

RAISE RABBITS Successfully By Knowing Facts. 48 page illustrated book describing 25 Breeds, Housing, Feeding, Breeding, Marketing, etc. Plus Bulletin. 25 cents. American Rabbit Association, 83 ARBA Building, Pittsburgh, Pa.

RAISE RABBITS on $500 month plan. Plenty markets. Free details. White's Rabbitry, Delaware, Ohio.

• • • FARM EQUIPMENT

SENSATIONAL GARDEN Tractor. Hoes between plants and rows, including strawberries. Eliminates hand hoeing. Standard in size, yet entirely different. Patent 2742840. Also tills. Fantastic offer to first few inquiries. Auto Hoe, DePere 72, Wisc.

• • • PERSONAL

BORROW $50 TO $600 By Mail. Quick, Easy, Private. No Co-Signers. Repay in 24 small monthly payments. For the amount you want write today to Dial Finance Co., 410 Kilpatrick Bldg., Dept. C-1, Omaha 2, Nebr.

ARABIAN DISTANT Instant hypnotism, complete, $5. BM/HGYL, London, W.C.I., England.

"YOU CAN Find Out!" Confidential information developed, any matter, person, anywhere. Officially licensed. Established 1922. Equitable Service Bureau, 15 Maiden Lane, New York.

BORROW BY Mail. $100-$600. Anywhere. Air Mail Service. Postal Finance, 200 Keeline Building, Dept. 918C, Omaha 2, Nebr.

"RULE OTHERS with thoughts." (Telepathy.) Details—stamp. Clarion, 846-S9 Sunnyside, Chicago 40.

MEXICAN LAW. Attorney Ceniceros, Apto 79.—C. Juárez, Chih., Méx.

• • • JEWELRY

FREE CATALOG. Costume jewelry parts. Supplies. Reasonable prices. Fast service. Guaranteed quality. Unique merchandise. Folsom's, Box 52, Medford 55, Mass.

COSTUME JEWELRY Supplies, Settings, Rhinestone, etc. 88 page illustrated catalog. 25¢. Milady, Box 1328, G.P.O., N.Y.C.

• • • REMAIL SERVICE

SAN FRANCISCO Remails 25¢. Monthly $3.00. Classifieds $1.00. Alyeto, 724-16th Ave., San Francisco 18, Calif.

MAIL. FORWARDED posted $.25 letter $3.00 month. Quick, Secret. Lloyd A. Moffitt, 319 1st Street, West Palm Beach, Fla.

CONFIDENTIAL REMAIL From New York City, 25¢ each. $3 monthly. Harvey, Box 2, Brooklyn 24, N. Y., Coney Island Sta.

SECRET MAIL Address. $3 Month. Hedgpeth, Box 830, Alhambra 17, Calif.

• • • MINERALS, PRECIOUS STONES

FIND HIDDEN Treasures in your own backyard . . . spare time—weekends. Get Free information about sources, bargains, vital data from the jewelry industry's biggest suppliers. Write for Free Booklet: Grieger's, 1633 E. Walnut, Pasadena 94, Calif.

CUT GEMS, make jewelry. Learn easily for profit or fun. Beautiful 100 page magazine tells how; where to get supplies, fascinating! Sample 25¢ or request Free literature. Lapidary Journal, Del Mar 6, Calif.

• • • MISCELLANEOUS

AMAZING SUCCESSES through franchises! Become exclusive franchise holder your territory. Information rushed. National Franchise Reports, MF-528, 333 North Michigan, Chicago 1.

FREE WHOLESALE Catalogs! 250,000 Products . . . Tremendous Discounts! Econ-O-Mart, Whippany 8, N. J.

BUY WHOLESALE 778,000 items. Free Details. Industries, Box 51-MIX, Des Plaines, Ill.

TRIGONOMETRY MADE Easy. Copy Right send 50¢ in coins. Paul White, 900 West, 190 Street, N. Y. C.

FREE FOLDER giving helpful hints about what to do before, after and during an Atomic Attack. Write: Atomic Aid, 215 West 34th Street, New York City 1.

GET 15 NEW U. S. Commemorative 4¢ Stamps. After year exchange for 30! Send $1.00. Stamps, Box 96, Bowling Green Sta., New York 4.

"COBRA. DEFENSIVE street-fighting tricks." Designed to help peaceful adults. $2. Gaucho, 846-S9 Sunnyside, Chicago 40.

• • • OLD GOLD WANTED

HIGHEST CASH For Old Gold, Broken Jewelry. Gold Teeth, Watches, Diamonds, Silverware, Spectacles, Platinum, Mercury. Free information. Rose Refiners, Heyworth Bldg., Chicago 2.

HIGHEST CASH Paid For Old Gold, Jewelry, Gold Teeth, Diamonds, Watches, Silver. Mail Articles Today. Information Free. Chicago Gold Refining Co., 6 E. Monroe, Dept. 1056, Chicago 3.

GOLD, SILVER platinum, diamonds, scrap jewelry, spectacles, watches wanted. Highest prices, free information. Wilmot's, 1067 Bridge St., Grand Rapids 4, Mich.

• • • WATCHES, WATCHMAKING, CLOCKS

WATCHMAKERS JOURNAL contains instructions on watch repairing. Sample copy 25¢. Dean Co., Peninsula Sta., Daytona Beach, Fla.

USED AND new watches $2 up. Free List. Southern Watches, 5-M South Wabash, Chicago 3, Ill.

WATCH AND clock repairing books. Free catalog. North American, 2320-CC Milwaukee, Chicago 47, Ill.

NEW-WHIRLING HYPNO-COIN HELPS HYPNOTIZE OTHERS IN MINUTES!

FASCINATING POCKET-SIZE INVENTION.

Hold the plastic HYPNO-COIN in front of the person you want to hypnotize. Then, make the hypnotic pattern whirl by gently vibrating the coin. This whirling motion is so fascinating, so eye arresting . . . it captures and holds your subject's gaze. Now—you are ready to hypnotize. Get this amazing hypnotic aid plus a Free revealing booklet of secrets and instructions. It tells you what to say and do, how to command, how to re-hypnotize with the snap of a finger. Also—entertaining feats that will thrill and amaze them at parties. Both the COIN and booklet—only 99¢ ppd. Your money back if not delighted.

GUARANTEE 99¢

HYPNOTIC-AIDS • Dept. 3-MI, 1133 Broadway, N.Y.C. 10

cabana marrone

PLAN YOUR SECURE FUTURE NOW

A PROFITABLE PROTECTED BUSINESS OF YOUR OWN

New, luxury, high-fashion fur now being domestically raised in U.S.A. and Canada. Our gold bond warranty assures life and production. All select, pedigreed, registered stock. Easy and economical to raise. Costs less than $7.50 per year to feed. May be raised in any climate . . . practically immune to disease. One pair should produce 10 to 15 young per year. You may qualify for membership in CNBA (Cabana Nutria Breeders Association), the largest and strongest Nutria association in the world. Products nationally advertised. Free ranch training program.

Cabana Marrone available only through authorized distributors and ranchers. Write today for complete information. Distributor inquiries invited.

CABANA NUTRIA INC.
Dept 37 636 West Lemon Arcadia, Calif.

NOW The Short Cut to Learning You've Been Waiting for

Learn "By Ear" with the DORMIPHONE

The Scientific Discovery That Works for You . . . Awake and Asleep

Now, at last, science gives you an easy shortcut to learning. With university-tested Dormiphone you "start" to learn while awake—then this amazing new tool takes over, continues the learning process for you while you go off to sleep.

Do you want to learn a language—memorize a speech or an array of important facts, figures, formulas—Correct your speech—Break bad habits? The Dormiphone is so simple to use, children benefit—so helpful and practical it is used by scientists, educators, psychologists, people of all ages, occupations all over the world.

Break Down Barriers to Learning

Find out HOW the Dormiphone works FOR YOU—how it can help you learn in less time, without intensive self-application. Eliminate drudgery—SAVE YOUR TIME—EFFORT. Write for FREE Book, "A New Dimension in Learning," or call for FREE DEMONSTRATION—Get the Scientific Evidence Today.

MODERNOPHONE, INC.
373-039 Radio City, New York 20, N. Y.

Gentlemen: Please send me your FREE Booklet. I am interested in learning more about the DORMIPHONE and what it can do for me. No obligation—no salesman will call.

☐ If under 18, check here for Special Booklet A.

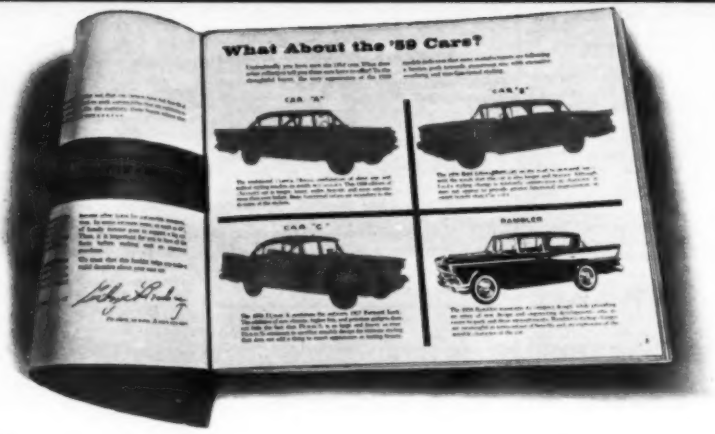
NAME _____

ADDRESS _____

CITY _____ ZONE ___ STATE _____

My main interest in the Dormiphone is for:
☐ Language Learning ☐ Speech Improvement
☐ Memorization ☐ Sleep Inducement
☐ Habit Correction ☐ School or College Work

Did '59 Bring You The Car You Asked For?



New Automotive X-Ray

Compares All Leading 1959 Low-Priced Cars!

Before you buy any new car, you'll want the straight facts on quality, features, economy, performance, room and comfort.

Within the pages of the 1959 edition of the popular AUTOMOTIVE X-RAY you'll find the answers. The X-Ray gets beneath the skin of each car . . . analyzes them side-by-side to show you what you get for your motor car dollar. Here is a revealing comparison of the new cars that presents the facts in clear, easy-to-read, easy-to-understand fashion.

All information is derived from automotive engineering publications and from the official literature of car makers.

Save time . . . save money when buying a new car. Go first to your nearby Rambler dealer for your FREE copy of the authoritative 1959 AUTOMOTIVE X-RAY.

1959 RAMBLER 4-DOOR SEDAN

Has 1959 brought you the car you want? Contrary to the expressed wishes of most car buyers, most American cars have grown bigger, bulkier, more expensive to operate. Rambler has held the line on size in '59 . . . further improved economy and comfort. Get all the facts in the 1959 AUTOMOTIVE X-RAY.

See Your Nearby RAMBLER Dealer

For Your Free Copy of The 1959 Automotive X-Ray

Get It Today . . . No Obligation!

Mail for McCahill

Uncle Tom is sorry he can't answer all his mail personally. In this column he'll answer the most interesting letters. Write to him at MECHANIX ILLUSTRATED, 67 West 44th St., New York 36, N. Y.

● *The constant horn-honker gets my vote as the Biggest Road Pest. What gets into a guy who blows his horn all the time for no reason at all?*

Gerald Flynn
Babylon, L. I., N. Y.

Some guys use a horn to make up for their poor driving abilities. We wrote on these pages years ago that real top drivers probably wouldn't use a horn more than three or four times on a coast-to-coast run.

● *Here's a pickle I wish you'd solve, Uncle Tom. About three weeks ago I was on my way home—on the outskirts of town—when I was flagged down by a pretty young girl. Her car was on the side of the road, out of gas. I volunteered to give her a lift to the service station about a mile away. At a traffic light just before reaching the station I pulled alongside a car containing, much to my surprise, my father-in-law, mother-in-law and wife! I said, "Hello" and then the light turned green. After a hard look they all drove off. I've been in the doghouse ever since. My wife won't believe my explanation as to why this girl was with me. Can you help me out?*

Charlie
Norwalk, Conn.

Just answer me this, Charlie: Supposing the girl had been a nice old man out of gas; would you have helped *him* out with a ride, too? If you say yes, we may possibly believe you. But frankly, we don't.

● *Which are better in a late model car—electric or hand-crank windows? Which would you prefer?*

Bill Harmsworth
Brooklyn, N. Y.

The kind you crank are the most reliable, though I'm personally adventurous and have electric windows in my two cars. The last Rolls-Royce I tested had the best system of all; electric windows *plus* a hand crank which took over if the electric jobs failed—and don't let anyone tell you they don't fail.

● *Once a month there is a race for the mail box to see who gets MI first. If I do, the first thing I look for is Mail For McCahill. Your column would cheer me up on the dullest day. Thanks for your humor. P.S. My husband likes you too.*

Mrs. Robert House
Topeka, Kan.

We like you, too—but we're not so sure about your husband.

● *I have been a spasmodic reader of your articles and mailbag for quite some time.*

C. R. Snyder
The Pas, Manitoba

Ever thought of taking tranquilizers?

● *I want to say yours is the best damn column on cars being written today. Anyone who writes the way you do and takes as much insult has plenty of guts.*

J.A.M.
Boston, Mass.

Oddly enough, that's what my tailor says when he tries to fit me.

● *I have seen your picture on many billboards in this state and would like to know if you recommend driving a car while wearing a pair of gloves? If not, is there a good reason for the gloves you're shown wearing?*

Robert Harms
Boston, Mass.

Many professional drivers wear gloves while driving. However, in that picture of me, the gloves were supplied by the photographer—perhaps to keep me from looking like a Marlboro Boy.

● *How come on the billboards you've got your name printed on your helmet? Your*

[Continued on page 54]

ARE YOU THE KIND OF MAN WHO COULD GO INTO BUSINESS WITH ME?

CHARLES E. BOWES, President

Not many men will be able to. But those who are will have an opportunity to make good money in their own automotive business.

Let's get this clear first. Starting a business of your own is no tea party. It takes a man with an iron will to succeed. It takes work—hard work. It takes money. But if the opportunity is right, and you are the right man for the opportunity—well, judge for yourself.

The man I want will distribute automotive accessories and parts to service stations in a "protected" territory. Service stations must have these products to stay in business. This man will hold a franchise, but he will be completely independent. So he must be a self-starter. He will need to invest about $7,500 in a truck and stock. From this original investment, he should earn $9,000-$12,000 a year in a few short years. And if he makes money, we do too. So we're careful to select the right man, and then give him all the help he needs toward building a solid, depression-proof business. If you think you have what it takes, if you think this is an opportunity for you, send today for the complete story. No obligation of course.

Bowes Distributors throughout the country are part of a multi-million dollar operation. They represent a firm which in 40 years has grown to be one of the largest of its kind, with plants in London, England; Hamilton, Ontario; Riverside, California, and Indianapolis. Its credit rating through Dun & Bradstreet is the highest (AAA-1) available.

CLIP THIS

Mr. Charles E. Bowes, President
The Bowes "Seal Fast" Corporation
Dept. 4020, 5902 E. 34th Street
Indianapolis 18, Indiana

Please send a copy of "So You Want To Be Your Own Boss!" Also tell me without obligation how I can go into business for myself as a Bowes Distributor.

Name.....Age.....

Address.....

City and State.....

the famous "500" line BOWES *of car care products*

Mail For McCahill

[Continued from page 53]

mommie afraid you might lose it?

Jim Hinds
Houston, Texas

Just trying to get a couple of Miss Rheingold votes.

● *We have seen your picture on the cover of the magazine. You look very handsome. We suppose that you must have a million things in your head.*

Guy N. Ceffari
"Popo" Port-Au-Prince
Haiti

I do have a million things in my head—but how did you find out? I've been trying to get rid of them for years with DDT hair oil.

● *Was disappointed in your October mail column that there weren't any suggested books to read. I've long since read all the books you've suggested in the past (though some were out of print). How about a few more?*

Paul Frale
Buffalo, N. Y.

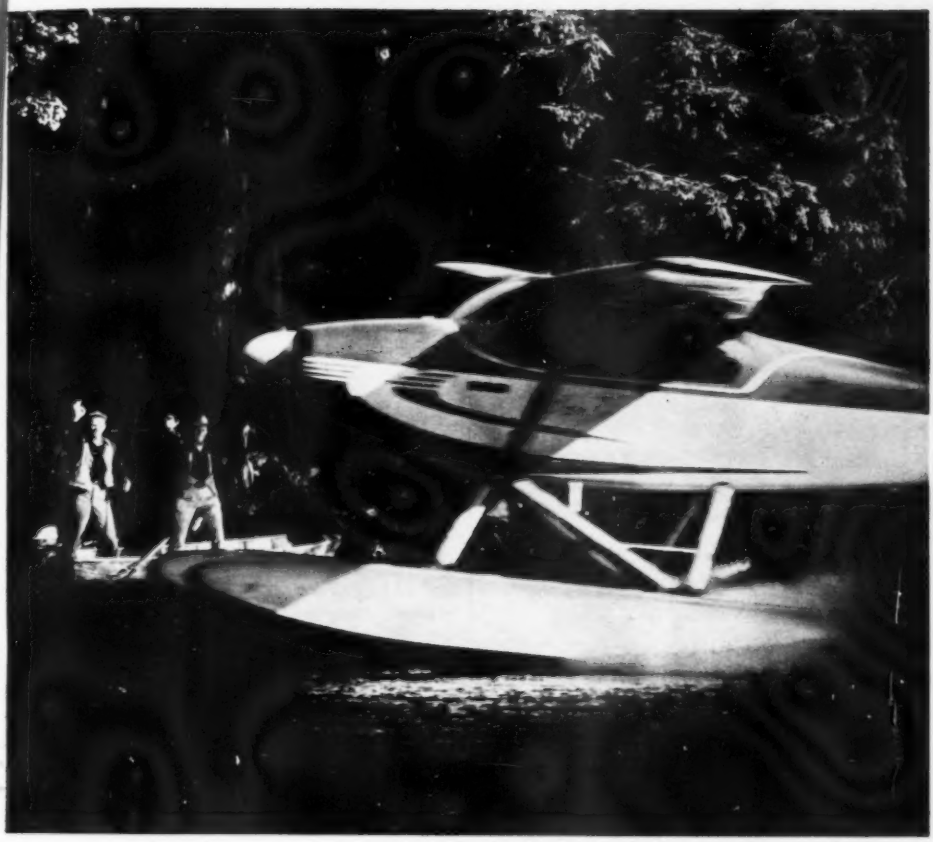
We have had quite a few requests for more books, so here goes: How To Cheat At Bird-Watching; Girl's Guide To Boy Scouting; 100 Little-Known Formulas For Winning At Parcheesi; Boy's Handbook To Successful Heart Surgery; How To Skin An Elk For Pleasure And Profit; Lucretia Borgia's 300 Grave-Tested Recipes; Thirty Uses For A Bucket Of Hot Water; Confessions Of A Packrat; I Put Sherman In The Tank, by Bernie Goldfine.

● *A bunch of my buddies and I were talking recently about car safety and were wondering if there is a big difference among various makes. Do more people get killed in one make than in others?*

PFC D. L. Warren
APO, San Francisco, Calif.

If you follow our monthly car tests, you must realize that some cars are much better in inherent safety factors than others. You must also realize that the larger volume cars—no matter how well they might be built—are bound, by the law of averages, to get into more hassles than the low-production slugs, simply through force of numbers. About five years ago, one very well-known make was all set to come out with the greatest safety campaign of all time, citing that not a single person had been killed during that year in one of their cars. Like watching a no-hitter being pitched, the tension wasn't really on

[Continued on page 56]



For the safe, dependable power they *must* have, most aircraft use Champions. Above, Cessna float plane.

Q. Why do *more aircraft the world over* use Champions than any other spark plug?

A. In the air, *dependable* power is vital! To get that same dependable power in your car, put in new Champions every 10,000 miles. You'll save gasoline, too!

World's favorite spark plug—engineered for every car built by Ford, General Motors, Chrysler, American Motors, Studebaker-Packard and every major foreign maker.

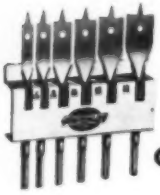
CHAMPION

NEW GREENLEE
ZIP BIT
with non-slip HEX SHANK

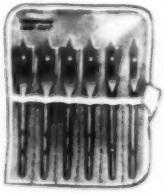
BORES IN ANY WOOD, ANY ANGLE, ANY SPEED

- ZIP BIT with exclusive *hex shank* chucks quickly, accurately in any ¼" or larger electric drill.
- ZIP . . . it's chucked, ZIP . . . the hole's bored!
- Cutting edges easily resharpened by filing or grinding.

Buy singly or in handy sets



6-piece set in metal rack
ONLY $3.90



6-piece set in plastic roll
ONLY $3.90

60c to 70c each in sizes from ¼" to 1"

GREENLEE

GREENLEE TOOL CO.
2243 Columbia Avenue
Rockford, Illinois

Mail For McCahill

[*Continued from page* 54]

until well into December of that year. All the key distributors were alerted by the factory Public Relations chief on December 15. By December 31 they felt they had it in the bag—but then two guys goofed by getting killed in their make of car on the way to New Year's Eve parties, one in New York and one in Fort Worth.

● *On the subject of night driving, of which I do a great deal, I hereby register my complaint against the "fashionable," unnecessary and seldom-properly-adjusted four-headlamp setups on new cars. Ridiculous for legal speeds.*

Alan W. Harkness
Green Cove Springs, Fla.

I've never seen the four-headlight setup yet that compared with two good ones—but the cops seem to like them, as they can quickly tell whether you're running with your high beams on when you shouldn't be.

● *In our isolation here we get a lot of fun out of your articles in* MECHANIX ILLUSTRATED. *Next year, about the end of June, we will arrive home after a five-year term in the Belgian Congo. When we get a car, we want one that we can trust for at least five years. What would you think of this plan: Buy a good used VW in Germany on our way home, tour Western Europe, take it to the USA and use it while we wait for the 1960 models to come out. We think then we'll try a Rambler two-door station wagon.*

Ed. Edstrom
Lulengele, Luluabourg
Belgian Congo

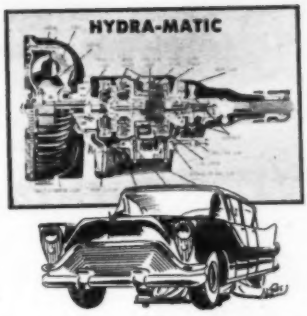
Sorry to hear about your five-year term in the Belgian Congo. We have pals doing 20-to-life raps in Leavenworth. About buying a second-hand Volkswagen in Germany—bear in mind that used car salesmen the world around bear infinite scrutiny. The Krauts might even slip you a 1934 Daimler-Benz 170H, which was a dead ringer for today's VW.

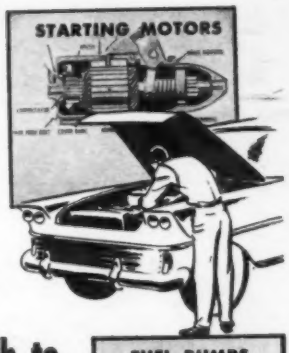
● *Do you concur with this writer in regarding the Pierce-Arrow and Duesenberg as the finest products of American automotive genius?*

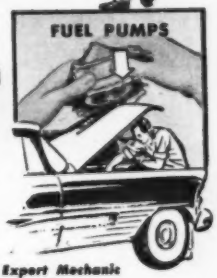
David M. De Herrera
Long Beach, Calif.

Not exclusively, by a long shot. The old Pierce-Arrow 66 was of Rolls-Royce quality and so was our big Locomobile and, before that, the Simplex. Other top quality Ameri-

[*Continued on page* 58]



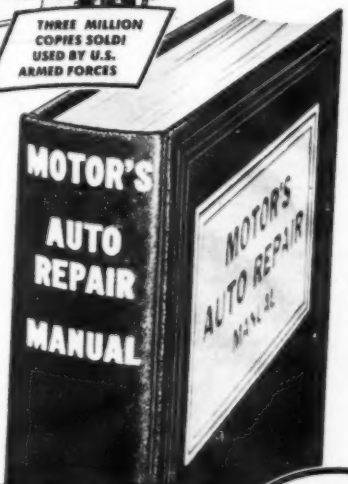




Thousands now find it a cinch to

FIX ANY PART OF ANY CAR

THREE MILLION COPIES SOLD! USED BY U.S. ARMED FORCES



Now — Whether You're a Beginner or Expert Mechanic You, too, Can "Lick" ANY Auto Repair Job — With 2,900 "This-is-How" Pictures, 225,000 Service and Repair FACTS, ABC Factory-Expert Methods

YES, this famous "Auto Repair Man's Bible" has turned thousands of beginner mechanics into experts. Helped thousands of experts save time, trouble and money "breezing thru" the toughest jobs. Now, the new edition can put YOU right on "top" of practically ANY job on ANY car listed — 1952 thru 1959!

No guess work! No false starts! This giant illustrated guide tells you, then shows you, with crystal-clear pictures and step-by-step directions — how to find the trouble fast — where to start . . . what tools to use . . . how to "wrap up" the job "in double-quick time!

"Never knew anything about repairing cars until I got this book. Has paid for itself time and time again."

—P. Pumper, Wisc.

So Simple You CAN'T Go Wrong!

Here's everything you need to know to repair over 600 car models. Over 1,100 giant pages, 2,900 "this-is-how" pictures, 231 "Quick-Check" charts, 23,436 essential repair specifications, 225,000 service and repair facts.

All the instructions and pictures are so complete, so clear that you can't go wrong. That's because your hands are guided by the men who actually build the cars. For this book brings you the time and work-saving methods from 178 *Official* Shop Manuals!

Everything You Need to Know

Here's complete ILLUSTRATED guidance on Automatic — Transmissions, Air Suspensions, Ignition, Carburetors, Fuel Pumps, Steering Gears, Brakes, Generators, Distributors, Power Brakes, Power Steering, Dash Gauges, Voltage Regulators, Starter Switches, etc., etc. Plus a big Trouble-Shooting Section that shows how to spot any one of 2300 car troubles.

"Have been a mechanic 25 yrs. Manual still takes me out of tight spots. It's simple enough to be understood by average person."

—V. Laurie, Nev.

No wonder this guide is used by the U.S. Armed Forces and hundreds of thousands of repair men. It's guaranteed to help even a beginner mechanic do a good job. And top-notch mechanics are amazed by the time-saving methods it brings them.

Try It FREE 7 Days

SEND NO MONEY! Just mail coupon. (Paste it to a postcard for fast action.) Use Manual for a whole week, free. If you don't agree it's the greatest time and work-saver you've ever seen — return book in 7 days and pay nothing. Mail coupon today! MOTOR Book Dept., Desk 933, 250 West 55th St., New York 19, N. Y. *(Schools, Bookstores: Write for discounts.)*

COVERS ALL THESE MAKES 1952 Thru 1959

Buick	Edsel	Oldsmobile
Cadillac	Ford	Packard
Chevrolet	Hudson	Plymouth
Chrysler	Imperial	Pontiac
Clipper	Jeep	Rambler
Continental	Lincoln	Studebaker
De Soto	Mercury	Thunderbird
Dodge	Nash	Willys

TRY BOOK FREE FOR A WHOLE WEEK

Same FREE 7-Day Trial on TRUCK REPAIR MANUAL

Covers every job on every popular make truck made since 1952, including GM, Mack and Cummins Diesels. Engines, fuel systems, ignition systems, starters, generators, transmissions, axles, brakes, steering, etc., etc. For FREE TRIAL, check box in coupon.

MAIL COUPON NOW FOR 7-DAY FREE TRIAL
(Attach to postcard if more convenient)

MOTOR BOOK DEPT.
Desk 933, 250 W. 55th St., New York 19, N. Y.

Rush to me at once (check box opposite book you want):

☐ **MOTOR'S New AUTO REPAIR MANUAL.** If O.K., I will remit $3 in 7 days, $3 monthly for 3 months and a final payment of $1.95 (plus 45¢ delivery charges) one month after that. Otherwise I will return the book postpaid in 7 days. *(Foreign price, remit $10 cash with order.)*

☐ **MOTOR'S New TRUCK REPAIR MANUAL.** If O.K. I will remit $3 in 7 days and $3 monthly for 3 months, plus 45¢ delivery charges with final payment. Otherwise I will return book postpaid in 7 days. *(Foreign price, remit $11 cash with order.)*

Print Name.....Age.....

Address.....

City.....Zone.....State.....

☐ Check here and save 45¢ shipping charge by enclosing WITH coupon in envelope entire payment of $7.95 for Auto Repair Manual (or $9 for Truck Repair Manual.) Same 7-day return refund privilege applies.

MEN WANTED NOW!

TO TRAIN AS...
HEAVY EQUIPMENT OPERATORS

- Make big money operating earth-moving equipment—Record construction to open up thousands of jobs at high wages.
- Easy introductory course puts you on road to brighter future for pennies a day.
- National placement service for graduates.
- Offered for the first time.
- Nationally recognized.
- Member schools in your vicinity.
- You owe it to yourself. Get facts on A. V. S.

Start NOW to be ready for record construction!

☐ Rush me free literature on this course. No obligation. No salesman will call.
☐ Enclosed is $10 registration fee. Start my course immediately.

NAME.....AGE.....
STREET.....
TOWN.....ZONE.....STATE.....

ASSOCIATED VOCATIONAL SCHOOLS
Dept. MI-3A • 1002 S. W. 13th St. • Portland 5, Ore.

You can start a $40.00 a Day Business
IN YOUR SPARE TIME

MAKE BIG CASH PROFITS IN YOUR OWN HOME SHARPENING HOUSEHOLD, GARDEN, SHOP TOOLS

Now you can turn spare time into Big Cash Profits with new Belsaw Sharp-All. Sharpen knives, scissors, shears, snips, ice skates, hedge trimmers, mower blades, grass whips, axes, chisels, screw drivers, scrapers and saws. Your own CASH business with no inventory. No calls to make. No experience needed.

Learn how easily you can start your own spare-time business. Amazing low-cost, easy payment plan. Send postcard for FREE BOOK.

FREE BOOK

BELSAW SHARP-ALL CO.
7189 Field Building • Kansas City 11, Missouri

Mail For McCahill

[Continued from page 56]

can cars of the past were the Stearns-Knight, Brewster, Winton and original Cunningham. The Duesenberg, though expensive and full of swashbuckle, didn't quite have the quality of these others from a Tiffany standpoint but was a great car. The Stutz, Mercer, Wills St. Claire and Leland Lincoln were all great, too, but not of Pierce 66 or big Loco quality.

● *After seeing some of the new cars, it looks to me like the industry is stealing Chrysler's styling blind. Do you agree?*

Bert Freeman
San Diego, Calif.

Style-stealing is not the exclusive sport of the Seventh Avenue dress dungeons. The boys in Detroit have no peers when it comes to picking the other guy's brains. The famed pirate, Jean LaFitte, would look like a pin-up boy in the College of Cardinals compared to the Michigan body-snatchers. In 1947 and 1948 they picked Raymond Loewy's Studebaker design of '46 clean to the bone and then tapped the marrow. A year or two later, Detroit lifted just about everything from the Tucker aside from the name and its non-existent bank account.

● *Just how much say do the dealers have about the future models and new designs and features?*

R. K. Hard
New Orleans, La.

About as much as the guy with the black hood has when the warden says, "Let's put the show on the rope." If the dealers were half as well organized as Walter Reuther's United Auto Workers, they—and you, the customers—would be a lot better off. Believe it or not, the dealers are the real capitalists in the automobile business. They have a bigger investment, as a group, than all the factories combined. Add to this the fact that they are in daily personal contact with their customers and therefore know far better than the factories what the buying public wants and what it will buy. A real gutty dealers' organization (such as we haven't got) could get you the cars you want instead of the cars Detroit thinks you should have, because if the dealers ever went on strike, even the largest manufacturer would be knocking on the door of bankruptcy in a matter of hours.

● *I've been wanting to buy a Volkswagen for two years but my wife has a keep-up-with-the-Jones complex and feels it would*

[Continued on page 60]

BUY GRAVELY FOR

MORE PERFORMANCE
MORE POWER
MORE FOR YOUR MONEY

Why tolerate equipment you have to push, pull and pamper? The Gravely and its Rotary Mower attachment solves your toughest mowing problems!

Whether you cut and mulch heavy, tough weeds over the roughest ground, or mow the finest lawn, Gravely does the job *better!* Because Gravely, with its *extra* power (now 6.6 HP) and versatility, does more tough jobs other tractors can't!

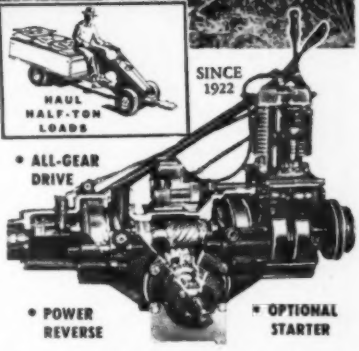
SINCE 1922

UNMATCHED PERFORMANCE!

Choose the tools that fit your jobs from 30 year-round attachments. All powered by one Gravely tractor!

Do the job *better* because power attachments are driven direct from the engine by splined steel shafts and gears. No belts or chains to slip, wear or break. More power *at the working tool!*

A FREE demonstration by your local sales and service representative will show you, beyond doubt, that the Gravely and its attachments will do your jobs *better, faster, easier.* Compare. You will see that you get *more* power, *more* performance, *more* for your money! . . . Available on installment plan.



Power attachments *securely* mounted by only four bolts. Balance, easy handling, simple controls. Cutaway view shows Gravely's clean, compact, power-engineered design — the reason for its remarkable performance. Make the wise choice — *choose* Gravely!

WRITE FOR FREE 24-PAGE BOOKLET!

Big, 24-page illustrated booklet, "*Power vs Drudgery*", shows how the Gravely solves your lawn and garden problems . . . Write for it today!

FREE! MAIL NOW

GRAVELY TRACTORS, INC.
P.O. BOX 603-C DUNBAR, W. VA.

Please send "Power vs Drudgery" Booklet and dealer's name to:

Name_____

Address_____

Town_____ State_____

Amazing HOLE SAW

saws any shape hole

FITS ALL 1/4 INCH DRILLS

ONLY $1

Insert this amazing Hole Saw into chuck of your 1/4 inch power drill. Bore thru material as usual with steady, easy pressure. Enlarge the hole by moving this hole saw in widening circles. You saw ANY shape hole with full saw stroke and just light pressure. Easily bores thru wood, plastic, plaster, plywood, etc. Cuts circles, triangles, zig-zags—in fast, any shape you may dream up—in SECONDS. Fine quality alloy steel gives long service. Send $1 (check, cash or money order) for prompt delivery. Satisfaction guaranteed or money back. Over 250,000 sold! Get yours now!

THORESEN, INC.
Dept. 10-C-42
585 Water Street, New York 2, N. Y.

EARN MORE - LEARN

AUTO

DIESEL MECHANICS

OR TRAIN WITH OTHER GREER DIPLOMA COURSES

- ☐ AUTO MECHANICS
- ☐ REFRIGERATION
- ☐ DIESEL MECHANICS
- ☐ AIR CONDITIONING
- ☐ BODY & FENDER REPAIR
- ☐ MACHINIST TRADE
- ☐ GAS-ARC WELDING
- ☐ ADVANCED MACHINIST
- ☐ PIANO TUNING & REPAIR

Skilled men are needed in every part of the country. Earn top pay in established shops or start your own business. Greer's expert instruction and actual shop training teaches you how. You learn by doing—quick, easy courses using the latest tools and equipment. Day, evening and part time instructions available.

Job placement and convenient living accommodations are yours while training. Contact GREER'S FREE JOB PLACEMENT SERVICE when you enroll if you wish part time or full time employment.

ENGINEERING DEGREE COURSES

- ☐ DIESEL AUTOMOTIVE ENGINEERING 27 MONTHS.
- ☐ REFRIGERATION & AIR COND. ENGINEERING 18 MONTHS.
- ☐ WELDING ENGINEERING 18 MONTHS.

All Courses Approved ☐ Civ. or ☐ G.I.

Please rush me free literature on the trade indicated, at no obligation.

NAME_____ AGE_____

STREET_____

TOWN_____ ZONE____ STATE_____

Established 1902

GREER SHOP TRAINING

Dept. C, 2232 S. Michigan Ave.
Chicago 16, Illinois

Mail For McCahill

[*Continued from page 58*]

make me look "unsuccessful." We live in a community of well-to-do people and though we're just starting up the ladder I feel my wife's argument is weak. She says we need a big American sedan to remind our neighbors that we're fairly successful, too. As we both read and enjoy your mail column every month, she has finally agreed to abide by your decision in this matter. Here's hoping. . .

Name Withheld On Request
Fairfield County, Conn.

Providing your wife has no other objections to a Volkswagen aside from the one you've outlined, the solution is very simple. Buy the VW, by all means, but only *after* you've bought your wife a mink coat to wear in it.

● *Would you kindly recommend a hair tonic for me, as lately I've noticed signs of my hairline receding. I'd like to know what you use so I won't!*

P. J. O'Hara
Richmond, Va.

As I've just about perfected the world's first great hair tonic guaranteeing a full head of hair after the first application, I will overlook your snide remark. I've been working on the formula night and day for many months. Since I have already applied for a patent, it will do no harm to reveal its outstanding properties here. Each bottle of McCahill's Magic Skull Elixir will contain at least two ounces of genuine hair! This is suspended in a homogenized mixture of spirit gum, rubber cement and a secret ingredient—glue.

The tonic will be available in the following colors: Closet Black, Nicotine Brown, Russian Red, Ice Tea Blonde and Green for the Irish trade. All a bald-headed user has to do to obtain a full head of hair is to pour some of my homogenized tonic on the spots he desires covered and then wait for it to set. In a few minutes he will have hair that will defy removal, except by scalping.

Hair, like all other perishables, will eventually wear thin due to hat rubbing, ceiling bumping and scratching. To compensate for this, all that is needed is an occasional reapplication of fresh touch-up tonic containing (of course) more hair, and your crowning glory will be like new again. For youths desiring to grow mustaches we have a smaller bottle called Upper Lip Mink. Three bottles and you look just like Commander Whitehead, Gabby Hayes or U. S. Grant.

—Tom McCahill

THERE'S A BIG DIFFERENCE IN PERFORMANCE TODAY

and Plymouth's got it!... let these experts tell you how!

"MAY PROVE TO BE THE ONLY '59 CAR WHICH HAS ACTUALLY IMPROVED PERFORMANCE ... BEST CAR OF THE LOW-PRICED 3 . . . A GREAT PERFORMANCE CAR . . . I DROVE THIS PLYMOUTH FLAT-OUT ... AND THERE WASN'T THE SLIGHTEST SIGN OF OVERHEATING OR BREAKDOWN."

Tom McCahill, Mechanix Illustrated.

". . . PROBABLY THE HOTTEST OF THE STANDARD PASSENGER SEDANS . . . TO BE FULLY APPRECIATED, MUST BE DRIVEN . . . QUICKEST CAR ON THE ROAD IN FURY FORM WITH THE BIG ENGINE . . . GREAT HANDLING ... MAY EVEN SURPASS SOME SPORTS CARS . . . "

Motor Life.

"IT'S QUITE A PACKAGE . . . CORNERING QUALITIES . . . DESERVE AN 'EXCELLENT' RATING WHEN COMPARED TO ANYTHING OTHER THAN A FULL-FLEDGED SPORTS CAR."

Ray Brock, Hot Rod Magazine.

"THIS YEAR'S 'HOT ONE' MAY BE THE 1959 PLYMOUTH."

Arthur R. Railton, Popular Mechanics.

And these are only a *few* of the raves! See your Plymouth dealer for FREE "Experts Folder" with more enthusiastic quotes. See and try the optional *New Golden Commando 395 V-8* . . . biggest engine in the low-price field. Discover *all* the news about the BIG DIFFERENCE IN PERFORMANCE among low-price cars for 1959!

So much the same in price...so different on the road

Plymouth

AC and GENERAL MOTORS COMBINE TO BRING YOU

TOPFLIGHT ENGINEERING • ULTRAMODERN LABORATORIES
THOROUGHGOING RESEARCH • CONTINUOUS TESTING
INTENSIVE QUALITY CONTROL

Knowing that spark plugs play an important role in the performance of your car . . . you'll be interested in this information about AC Hot Tip Spark Plugs and why they give you more!

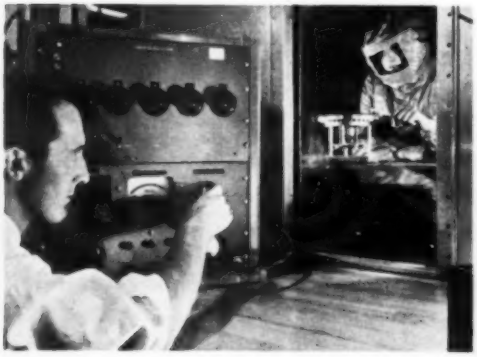
For more than a half century AC has been the spark plug others followed. The leadership established by AC when cars and trucks became a horse-replacing reality has never been seriously challenged by even the closest of imitators.

AC, sharing some of its basic patents with others, pioneered and developed the kind of spark plugs high-compression engines demand.

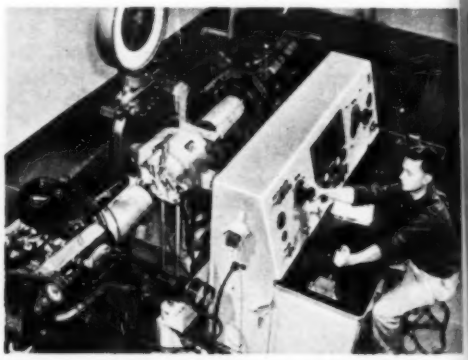
AC Spark Plug engineering, research, testing and manufacturing development has kept ahead of ever-growing engine demands!

There's still more. You also get the tremendous advantages of General Motors' unsurpassed research and testing facilities. You can depend on AC to stay ahead in spark plug technology.

AC HOT TIP Spark Plugs are used on more new cars than any other brand, and are engineered for *all* makes of cars, trucks and tractors.



LABORATORIES—AC maintains completely staffed metallurgical, ceramic and mechanical engineering laboratories to constantly assay and improve spark plug materials. This comprehensive research program has produced the many AC "FIRSTS" in technology.



DYNAMOMETER ROOM—AC uses the finest equipment to simulate road tests under laboratory conditions. AC Hot Tips are constantly checked under conditions far more severe than the average driver will ever meet.

AC SPARK PLUG ❀ THE ELECTRONICS DIVISION OF GENERAL MOTORS

ACTION
starts with AC

...the Spark Plug others follow!

FIRST with the stronger one-piece heat-sealed shell construction.

FIRST in welded side electrode construction for better heat and electrical current conductivity.

FIRST to incorporate a resistor element for elimination of radio interference from the ignition system.

FIRST with fused metal-ceramic seal to stop center-wire compression leakage.

FIRST in the use of unglazed insulator tip to resist lead attack.

FIRST with the aluminum oxide insulator in the United States—a patented AC ceramic composition!

FIRST to use greater "scavenging" area between insulator and shell.

FIRST with the long, thin, recessed, quick-heating insulator tip—the AC Hot Tip—another AC exclusive!

FIRST with the copper-core electrode to improve performance under special high temperature operating conditions in commercial applications.

TESTED BY AC

TESTED AGAIN BY GM *and proved daily... in millions of vehicles**

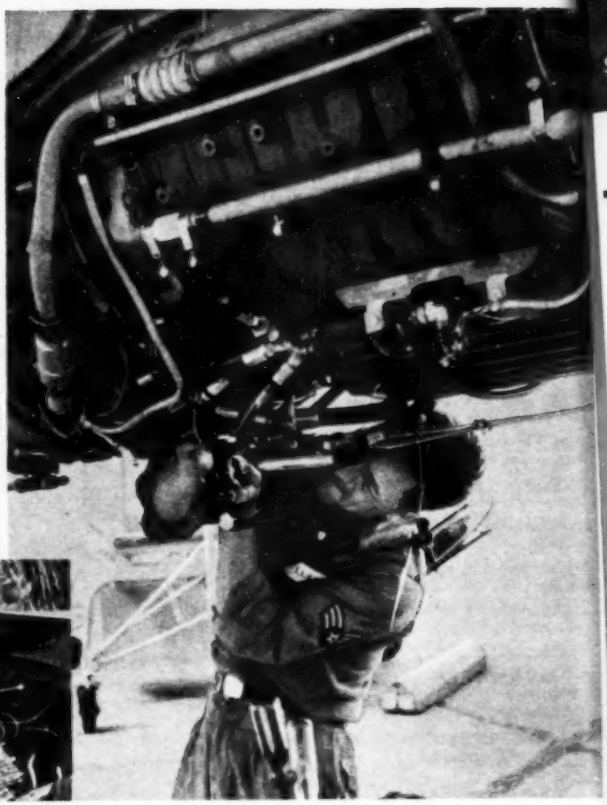
PROVING GROUNDS—AC maintains staffs of experts at each of the famous G.M. Proving Grounds. Around-the-clock, around-the-calendar driving under all climate and road conditions demands the best from ACs.

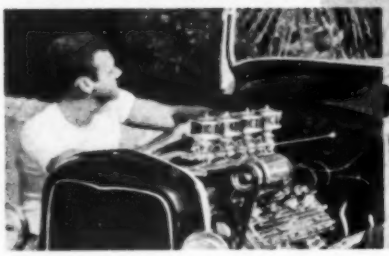
TECHNICAL CENTER—AC employs all of the facilities of the great General Motors Technical Center . . . recognized as one of the finest facilities in the world . . . as a complement to AC's own engineering creativity to insure its continuing leadership.

* ***Millions of motorists drive millions of miles daily with AC Hot Tip Spark Plugs. Get better performance and greater economy by installing new AC Spark Plugs in your car. Your nearby AC Dealer has them.***

MEN OF MECHANICAL ABILITY:

YOU CAN BE A VALUABLE MAN IN THE NEW AGE OF SPACE





TRAIN IN THE U.S. AIR FORCE

As a man of mechanical ability, you face a future of unlimited opportunity. This is the Age of Space, and *the valuable man is the man who combines mechanical ability with sound training.* Where can *you* best get this training? In the U. S. Air Force—where the Age of Space is *reality.* Here, Airmen work, day to day, in actual Space Age specialties: rocketry, supersonic aircraft, advanced electronics—and soon: manned flight in outer space. In short, the Air Force offers you the broadest, most complete range of Space Age specialty training available today. For details, see your local Air Force Recruiter, or mail the coupon.

PASTE COUPON ON POSTAL CARD AND MAIL TO:

Airman Information Dept. M1-10321
Box 7608, Washington 4, D. C.

Please send me information on my opportunities in the U.S. Air Force. I am between the ages of 17-34 and reside in U. S. A. or possessions.

Name_____

Address_____

City_____ Zone____ State_____

January • February • March • April
May • June • July • August
September • October • November • December

Mechanix Illustrated

1959

Tom McCahill Picks...

10 BEST BUYS IN ECONOMY CARS

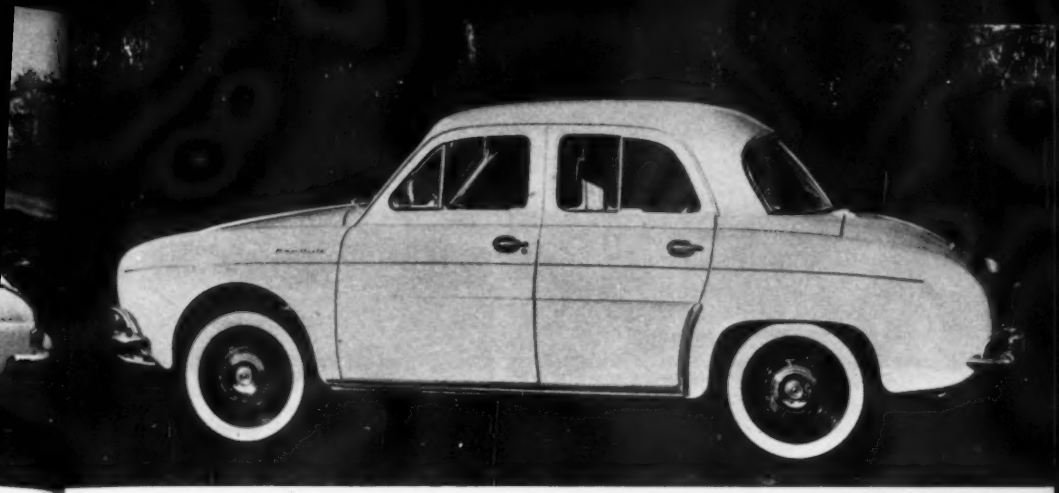
VOLVO. This homely Swedish rig copped No. 1 spot in Uncle Tom's considered opinion. The four-speed version will top out at a shade under 100 mph and gets 25-plus mpg. $2,330.

SAAB has front-wheel drive, gets 28-35 mpg on three-cylinder two-cycle mill. $1,895.

WHAT'S the *real* pitch behind the success of the small imported car? There have been more theories about this than Bayer has aspirin tablets. Undoubtedly, many of these notions are wrong but the tremendous and growing popularity of the small import cannot be denied. I have personally been yanked into conference by major American manufacturers for my opinions. One big U. S. company asked me if I felt they should build a small car similar to the Volkswagen. By the same token, I counseled Heinz Nordhoff, Director General of Volkswagen in Germany, about the inadvisability of building Volkswagens over here. Nordhoff wrote me later that he was taking my advice and the little beetles are still being nailed together by elves in der Black Forest.

My own opinions as to why the imports have been so successful don't exactly jell with those of my old friend, George Romney, prexy of American Motors. In clever advertising, Romney

VOLKSWAGEN will run at top 70-mph speed all day. Air-cooled, rear engine puts out up to 35 mpg. Sedan is $1,545. Sun-roof job is $1,625.



RENAULT DAUPHINE gets up to 40 mpg on four-cylinder rear engine, 70-mph speed. $1,645.

has been blasting the big-car industry with good-natured barbs about their oversize, telling just how much more fun and practical it is to own a "compact" car, such as his Rambler. In some cases George has a point. But for the majority of American buyers I don't believe it's a *small* car they're after. I look at this import deal as an Irish stew—some eat it because they're hungry, some eat it because they like it and some because it's all they can afford.

As pointed out on these pages, the typical new small import can be bought for second-hand American car money, without the possible "social stigma" of stamping the purchaser a used-car buyer. This is one angle. Another, closely allied with the first, is that many imported small cars can be maintained for much less loot and will run at their very best on our lowest grade fuel. The more popular makes, such as VW, have a much higher resistance to price depreciation—and this may be one of the key reasons for many purchases.

For example, a typical American car selling for $3,500 will lose, in the first 12-18 months of its life, as much as $1,500 or more in resale value. The $1,600 Volkswagen, during the same period,

HILLMAN MINX averages around 30 mpg. It has a four-cylinder engine and tops out at about 70 mph. The wheelbase is 96 in. Price: $1,849.

FORD ZEPHYR has six-cylinder mill, top speed of well over 80 mph and gets up to 25 mpg. It has 107-in. wheelbase, weighs 2,691 lbs. $2,193.

FIAT 1100 averages about 35 mpg, will do close to 75 mph with four-cylinder engine. $1,743.

DKW has three-cylinder, two-stroke engine, front-wheel drive, maximum 80-mph speed, averages 25-35 mpg. It sports a wheelbase of 92 in. $1,995.

SIMCA gets up to 30 mpg, does 75-plus mph. The Elysee is $1,745. Convertible above is $3,263.

might lose $200, principally because of scarcity. Now, you don't have to ask your old economics professor which deal he'd recommend. However, arguments over the reasons why people buy imports could keep the Princeton debating team at full howl up to the year 2000.

Is size the factor? It is my sincere belief, after talking to hundreds of buyers and combing thousands of letters, that size is only a small factor in the booming sales of the imports. Despite George Romney, 90 per cent of American buyers not only want a fairly large car but must have one. When Americans hit the road during vacation with multiple kids, pets, water skis, beach umbrellas, fishing tackle and all the typical goff, they need a sizeable roadliner.

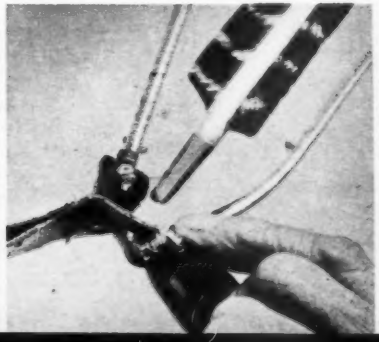
I've read the ads, just as you have, which show the smart-as-a-six-dollar-whip small car buyer parking his neat package in a space forbidden to such cars as Cadillac, Chevy, Olds 98 and other "tanks." Yes, Virginia, there are times [*Continued on page* 172]

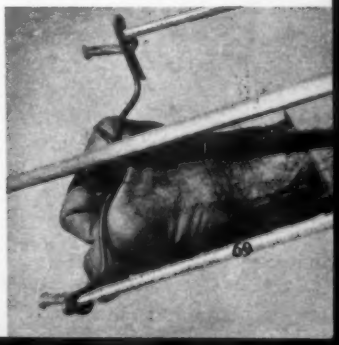
OPEL REKORD can better 75 mph on four-cylinder engine, do 25-30 mpg. Price is $1,957.

HE SLINGS ARROWS

SLINGSHOT BARNEY and his curious weapon, which can speed an arrow a full 335 yards. It folds into a small bundle that can be carried in a shirt pocket.

BARNEY FRY'S slingshot shoots arrows, as well as the more usual projectiles, using a grooved center post to guide them. The arms spread wide for arrow shooting, are brought together for pellets, fold closed for the pocket. Barney can cut string at 50 feet consistently, has done it at 50 yards. The Santa Monica, Calif. shooter's biggest game to date—a bear. Weapon is made of steel wire and shock cord or rubber surgical tubing. •





Forget Something?

By Lester David

"YOUR memory's what you forget with," a small boy once said. And indeed, the Average Joe has a memory like a moth-eaten mantilla. But if you have no photographic memory, remember this (if you can):

No one has ever had a photographic memory. The thing just doesn't exist.

Many memory wizards do claim to have photographic memories, of course. But Ian M. L. Hunter, a noted British psychologist, reports that the mind can't photograph anything. Dr. Bruno Furst, director of the School of Memory and Concentration in New York, says, "It's utterly impossible for any person to glance at a block of fine print and then relate everything he has seen exactly as it appears in the original." If anyone else says he can, says Dr. Furst,

Scientists reveal new and encouraging findings about your wonderful memory.

you may give him a sample test.

Show him the financial page of a newspaper and let him look at the stock quotations for a few seconds. Then ask him to repeat what he saw, not only straight down the list but backward. He'll flop badly. And so will the cleverest stage memory wizard.

The real facts, once and for all, are these:

A few persons, mostly children, possess a rare mental quirk known as "eidetic imagery." They can look at a picture and then visualize it in their minds, as though the photo was being flashed on a mental screen before their eyes. This is the closest a human being can come to having a camera-like mind.

But these images are not "photographic." The more interesting parts of a picture are remembered best and the rest fades or is forgotten. The eidetic memory is as factually unreliable as it is rare.

But if there are no snapshot brains, [*Continued on page* 177]

WHAT'S NEW IN PILLS

MODERN PILL (tablet, really) gets breakability test. It must break easily, not too easily.

By Donovan Fitzpatrick

PILLS are fast becoming the answer to most of life's little problems. Feeling low after a battle with your wife? You'll soon be able to snap back with a "psychic energizer"—a new pill that prods you out of your depression. Do you burn on the beach? Your doctor can prescribe a pill that gives you a painless Waikiki tan. Worried about Strontium 90? A pill is being tested that will increase your resistance to fallout. Gaining weight from midnight snacks? There's a pill that kills your nighttime hunger. There are pills that are supposed to clean your teeth and pills coated with Portland cement to keep harmful contents from contact with your mouth. One modern pill comes in layers like a hardball candy. The first layer puts you to sleep, the second keeps you asleep for eight hours and the center wakes you up.

Pills are the most popular form of medication. Americans spend hundreds of millions of dollars for pills containing vitamins, laxatives, hormones, barbiturates, antihistamines, heart stimulants, antispasmodics, tranquilizers.

Forty million tranquilizer prescriptions were written last year. But the best-selling pill is still acetylsalicylic acid or aspirin. In 1957 American gulped and chewed some 16 billion 5-grain aspirin tablets. Although so many people rely on aspirin as a pain-killer, fever-reducer and antirheumatic, no one really knows how it works.

They're really not pills, of course; nowadays they're nearly all tablets. There's a difference. Pills are made from doughy stuff and have a hard crust. They dissolve slowly inside you. The earliest pills were sun-dried balls of mud. ("What *you* need is a good ball of mud, [*Continued on page* 188]

MODEL FLYING SAUCER

YOU can tether your flying saucer or let it fly free! Its Wen-Mac Rotomatic engine—an internal combustion, two-cycle, class ½A glow plug type with an .049 displacement—runs from a minute to a minute and a half. When the engine is started, the entire saucer begins to spin and *whoosh*—it's off into space. Wen-Mac Corp., Los Angeles, Calif., makes the satellite. •

CRASH-PROOF CAR

VIRTUALLY crash-proof is the station wagon of Dr. Johan Hultin, of San Francisco. The interior is almost completely covered with spring-and-horsehide padding. Safety nets cover rear windows and doors. Four safety helmets and seat harnesses in the front seat are provided. The added features cost about $200. •

BUMPER is designed to grip, rather than bump, above. It has four 1,500-lb. shock absorbers capable of withstanding a 40-mph crash with no damage to car. Dr. Hultin, left, reaches for fire extinguisher. Car has padded wheel, nine rear view mirrors.

IT'S NEW

GOLF CAR with Goodyear weight-spreading tires can't hurt softest turf. Car is sold by the Meisel Distributing Co., St. Louis, Mo.

ELECTRICIAN'S GUN fires CO^2 cartridge through 250 feet of twisting conduit, pulling nylon which can then pull wire through.

3-D FINGERPRINT comes off finger seconds after liquid nylon is sprayed on. An Army system that provides smudgeproof prints.

SOLAR POWER KIT uses any light as source of energy, runs small motor. Kit is made by Hoffman Electronics.

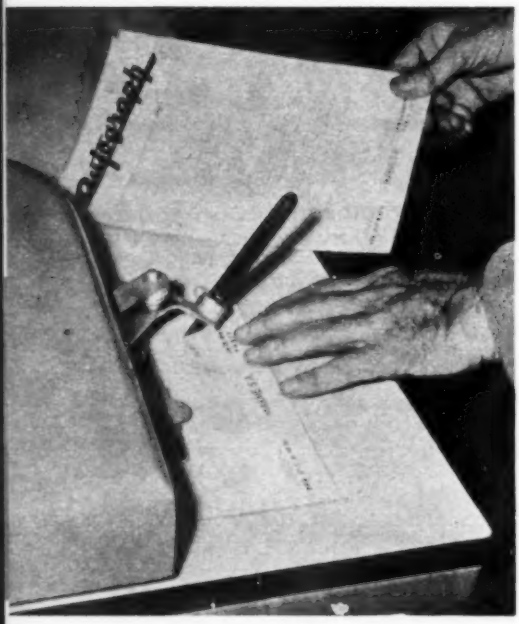
PIGGY-BACK RADAR detection equipment being tested at Fort Huachuca, Ariz., may aid in location of enemy, lost patrols, etc.

KID CAR for $160 has 2½-hp engine, tops out at 21 mph. Clutch is automatic. Maker is the Great Lakes Tractor Co., Cleveland.

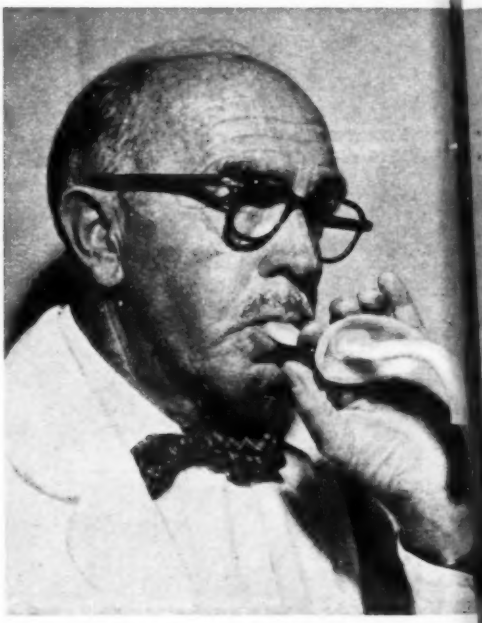
PUNCTURE POWDER seals tubeless tire punctures as wheel turns. From US Rubber.

CONTINUED . . .

A-BOMBER: Britain's Blackburn NA 39 is designed to hedge-hop in under the enemy radar defenses to target, toss bomb up as it climbs, scream away from blast at supersonic speed.

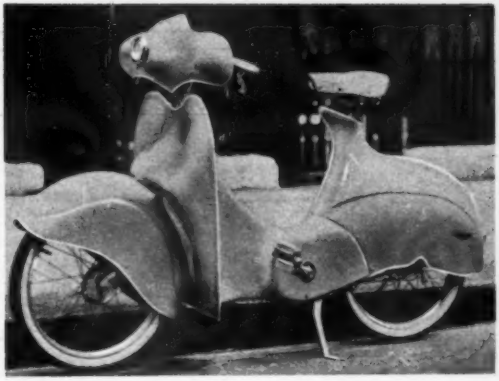


MECHANICAL FORGER. French, not only allows secretaries to sign boss' letters, it uses his own pen. You can lock it up, too.



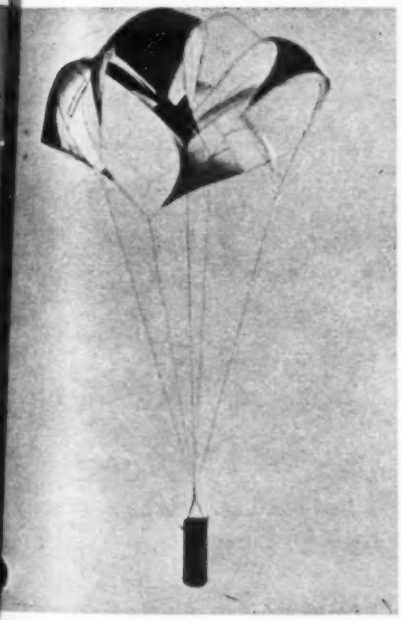
LIFE SAVER tube for mouth-to-mouth artificial respiration without distasteful aspects. Dr. Arthur Bryan, its inventor, shows how.

ELECTRIC DETECTIVE sprays fingerprint powder on likely surfaces, then wipes away. Japanese.



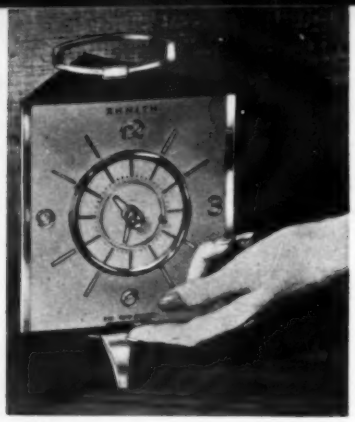
BIKE BODY, glass fiber, covers standard pedal bike. English maker may possibly be thinking of good old gook-crazy American juvenile market.

TRANCE MACHINE hypnotizes user by blinking little lights. Helpful to practicers of self-hypnosis as well as to all insomniacs.



SPIN CHUTE rotates, eliminates opening shock, drift. No live jumps have been made with it up to now.

ALASKAN WATCH changes numerals at noon to become a 24-hour clock. Useful in long, confusing, Alaskan dark and daylight.

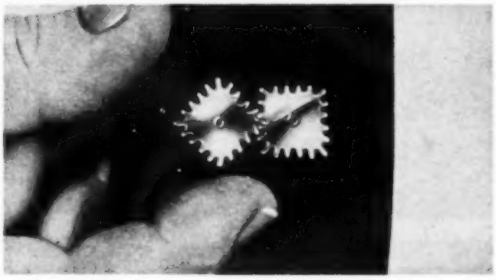


BATTERY POWERED CLOCK-RADIO

ZENITH Radio Corp.'s new Golden Triangle is a portable clock-radio that works well and looks elegant anywhere in the house. Mounted on a swivel base, it revolves to present three different faces—the clock, radio control, radio speaker grille. The radio chassis is transistorized. Price will be about $150 in the U. S. That includes the flashlight batteries that power the combo. •

SQUARE GEAR TIE-PIN

TURN these tie-pin ornaments and demonstrate an unusual mechanical principle. They're $4.95 with matching cuff links, plus tax, from Baby Slide Rule Company, East Lansing, Mich. •



SAFETY PLATFORM

A NEWSPAPER photo of a man who had fallen to his death while painting a window led Thomas Woyton, Elmont, N. Y., to design this window-servicing platform. The wooden platform will not collapse in use, is placed in position from inside the window. A pipe braced against the uprights of the window frame, lying on the sill inside the window, holds platform in place. For painters, washers, glaziers, etc. •

PIGGYBACK FIRE-FIGHTER

THIS strap-on rig for fire-fighters uses a neoprene-coated nylon water bag. The hand pump is attached to the bag by a neoprene hose. Ball-bearing swivel connectors prevent hose kinks and permit left-or-right hand operation. The bag holds five gallons, weighs only 46 lbs. full. That's light enough for Boy Scouts or parachuted "smoke jumpers." The pump is a single stroke action positive displacement unit. •

BRIGHT IDEA

AWARD

MECHANIX ILLUSTRATED

MAGNETIC NAILHOLDER

WIN $50

MI will award $50 each month to the first person who tells us of a new and useful gadget that is patented and in production. Manufacturers are also eligible for this award. Pictures and a description should be sent to Bright Ideas Editor, Mechanix Illustrated, 67 West 44th Street, New York 36, N. Y.

"OH, the curse of an aching thumb!" No more black thumbnails with the Magnetic Nailholder, a gadget devised for thumb-bashers who can never hit the nailhead. It has a magnetic clip which holds the nail steady for that first and most difficult shot. It also holds brads, staples, tacks and screws. And you can use it in hard-to-get-at spots. The Magnetic Nailholder is $1. Magnetic-Holder Company, P. O. Box 715, San Antonio, Texas. •

DO-IT-YOURSELF BOMB KITS

1

2

3

1. BLAZING Molotov Cocktail burns with fierce intensity that can fire a tank.

2. BOMB KITS come with instructions in French and German for Swiss population.

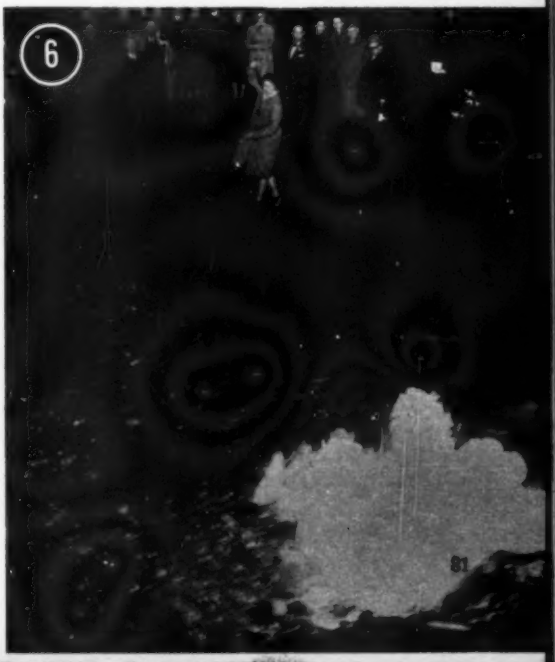
3. SWISS MISS packs kits. The whole country takes part in training program.

4. INGREDIENTS. Gas-filled bottles with their cotton wicks are ready to light.

5. COCKTAIL is tossed by student in a practical how-to training demonstration.

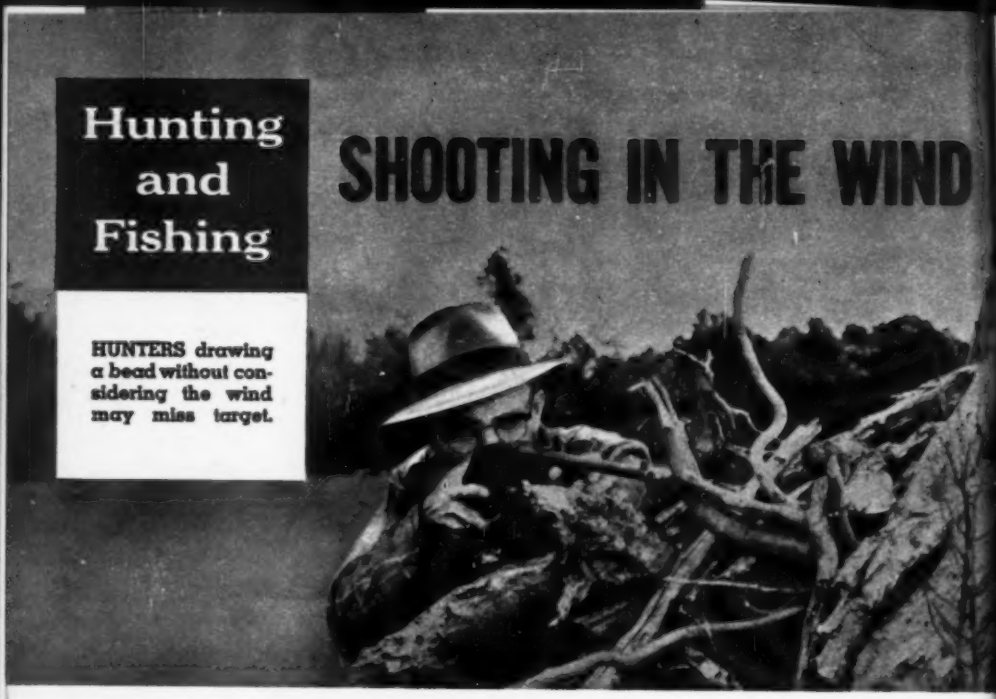
6. BLOOEY! Molotov Cocktail has quite a kick. It is nasty street-fighting weapon.

INVADERS of Switzerland would be invited to a fiery Molotov Cocktail party. Volunteer groups, in the interests of self-defense, have prepared thousands of Molotov Cocktail bomb kits for distribution to civilians. Each kit contains a cotton wick, a small plastic bag of gas to soak it with and a string to tie it to a gas-filled bottle. Instructions in French and German tell how to make the bomb that can put an enemy tank out of action. The potent Molotov Cocktail was first brewed in the Spanish Civil War. •



Hunting and Fishing

SHOOTING IN THE WIND



HUNTERS drawing a bead without considering the wind may miss target.

By Wynn Davis

EVERY hunter who has ever held his sights on a chuck at 300 yards, or squeezed off a careful shot at a buck 1,000 yards away, knows that a breeze can blow his bullet off course and cause him to miss the target—unless he makes the correct wind compensation.

If you think this doesn't concern you because you hunt in heavily wooded country where the occasion for a long shot seldom arises, think again. How about that time you reached a hilltop and saw a trophy buck on the slope of the next hill—an easy 900-yard shot you missed by a mile? Maybe the wind wasn't blowing enough to rustle a leaf where you stood but it may have been blowing ten mph through the unprotected valley between you and your target. This is no roaring gale but it is enough to deflect your bullet.

Wind doping is tough. If the wind blew steadily all day long, it could be figured easily. But it changes speed every few minutes and, worst of all, it often shifts direction back and forth in the "fishtail" pattern so dreaded by all match shooters. However, there are a few things you can do to hit your mark when shooting in a wind.

Don't fall for the old line that a faster bullet is the answer to wind deflection. High speed bullets actually drift more in a wind than do the slower ones!

This usually comes as a shock to the average shooter. Isn't the faster bullet exposed to the wind for less time when it speeds at a greater velocity through the air, he reasons? This would be true except for the cold fact that velocity has little to do with bullet drift in a wind. Lag is the real villain. Lag is the difference between the time it would take your bullet to travel a given distance in a vacuum and the time it actually takes in the air. The faster the bullet, the more air resistance and the more lag.

Experiments by Dr. F. W. Mann—reported by William C. Davis, Chief Engineer of the Infantry and Aircraft Weapons Division, Development and Proof Services, Aberdeen Proving Grounds—have shown that something other than gravity and wind velocity is involved in a bullet's flight. According to Davis, Dr. Mann first determined how far a certain bullet fell when fired from his rifle for 200 [*Continued on page* 172]

ANY sunny day this winter you might have found MIMI sunbathing in her Tin-Tan—if you were lucky. Tin-Tan collects the sun's rays, gets summer-hot even when the mercury plunges below freezing. The box is made of vinyl with a Mylar surface. Mylar's a Du Pont polyester film—very shiny. Tin-Tan's made by Tin-Tan Products Corp., 631 Westchester, Grosse Point 30, Mich. •

MIMI

MCCAHILL TESTS

THE OLDS 98

This 115-mph car is "big without seeming to be big and as able as a full-sized gorilla in a saloon fight," says Tom after exhaustive test.

By Tom McCahill

TOM TOOK Olds to new Daytona International Motor Speedway track in Florida for acceleration tests but high-speed oval wasn't quite ready for action.

ON THE BEACH. Tom and Boji and good-looking Olds with its grille-ful of headlights.

I SAW the 1959 Oldsmobile for the first time while I was testing another breed of goat on the General Motors Proving Grounds. That Olds was a blacked-out test car and to me it was the best-looking car I had seen to date. (For our two hermit readers in Hudson's Bay, a "blacked-out" test model is usually painted all black, including the grille, hubs, bumpers, etc., making it look like a three-dimensional silhouette.)

I wish it were always possible to give a car as long and as varied a test as we gave the new Olds 98 a few months later. Only by living with cars through all conditions can you get to know them for what they really are. This Olds test started at Daytona Beach, Fla., and wound up in Bucks County, Pa. I had taken my boat, *The Rooster,* south on its annual trek and decided to use the Olds test car for my overland return transportation.

When we arrived in Florida, the weather was as warm and inspiring as the front line at the Folies Bergeres and we immediately took the Olds out to the new Daytona International Motor Speedway track. The deep turns were being paved when I arrived and there was no chance to make much of a run on the track, so we drove over to the

TEST CAR SPECS

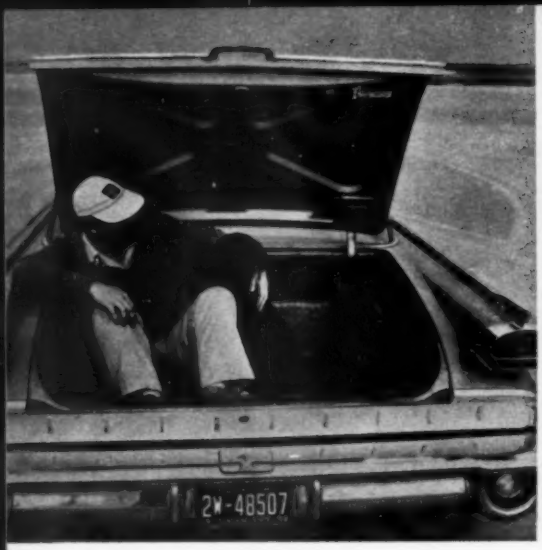
MODEL TESTED: **Oldsmobile 98 four-door Sedan**

ENGINE: **OHV V8; 394** cubic ins; **315** brake hp; **435** ft-lbs max torque; **8.75** to **1** compression ratio. Bore **4⅛** ins; stroke **3 11/16** ins; Fuel required: Premium. Standard axle ratio: **3.42:1.** Wheelbase **126.3** ins; length **223** ins; height **56** ins; width **80.8** ins; front tread **61** ins; rear tread **61** ins. Weight **4,595** lbs. Gas tank capacity **20** gals. Turning circle diameter **43** ft. Tire size **9.00X14.**

PRICE (without optionals): **$3,890**

PERFORMANCE: **0-30** mph, **3.1** secs; **0-50** mph, **6.9** secs; **0-60** mph, **9.4** secs; **40-60** mph, **4.3** secs. Top speed **115** mph. All times recorded on corrected speedometer.

ABLE OLDS handled well and impressed Tom with sure-footedness on sand, ice, snow.



BOJI gets into the act with master trunk-tester, Jim McMichael, in roomy storage bin.

TIRE VALVE is behind hub cap which must be removed before you can put air in tube.

famous Measured Mile on the beach.

On the sands of Daytona Beach, this thoroughly comfortable four-door sedan racked up a little better than 115 mph. No doubt with a good competition tuning this almost 4,600-pound job might prove to be one of the hottest performers on the road. The engine size has been boosted to 394 cubic inches from last year's 371. In acceleration runs, the big sedan averaged out to 8.4 seconds for 0-60 mph. And this, as they say across the creek, is "rather rapid" in any company. Zero to 30 mph averaged 3.1 seconds and the car jumped from 40 to 60 in "scat" gear in 4.3 seconds. This is a hot-performing automobile and though it doesn't break the MI acceleration record, it does come within a whisker of tying it.

Before going any further, let me go on record and state that although this Oldsmobile turned out to be a really top-flight automobile, it had a few things about it that I definitely didn't like. Perhaps the worst was what Olds calls its "sculptured twin booms." Translated, this is the raised chrome panel outside the window, running fore to aft. This sharp-edged strip guards a miniature bowling alley which runs from hood to tail and has a nasty way of jutting into your arm. I know all dictates of proper driving say you shouldn't hang your elbow out the window but I've been doing it since I learned how to spell "dictates" and so have thousands of others. The Olds 98 is no car for this unless you deeply enjoy nagging discomfort in the left arm.

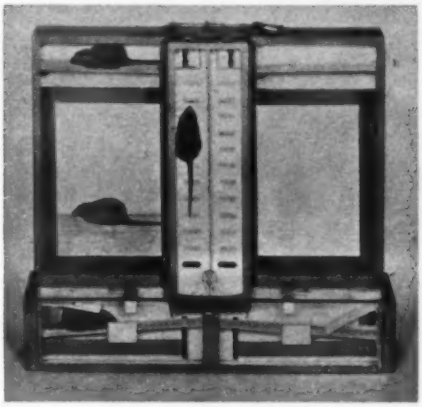
Now this particular dislike of mine might not bother you at all, as you may be an inside arm man, so here are two more beefs directed at this chrome-guarded [*Continued on page* 179]

PULL-OUT radio can be used as portable on beach, at home, etc., as well as in car.

MORTAR RADAR

SCIENCE has come to the aid of mortarmen. A new highly mobile, trailer-mounted radar system capable of detecting an enemy mortar shell in flight and electronically computing the exact location of its tube and crew, permits immediate and deadly accurate counterfire. The U. S. Army and General Electric Co. developed the system which locates enemy mortars more than six miles away. •

BETTER MOUSE TRAP



A NEW self-setting aquatic mousetrap developed by the Self-Sett Mousetrap Co. of Cleveland can kill over 100 mice at a single setting. Food entices the mouse into the trap. He walks up and tips a seesaw-like ramp which closes the entrance, resetting the trap. A pinpoint of light leads him to the top of a ladder where another spot of light takes him to a ramp which dumps him into the drink—and *glub!*—one drowned mouse. •

HEART ALARM

DR. William F. Veling of the Department of Surgery, Grace Hospital, Detroit, recently unveiled his six-oz. battery-powered cardiac monitor. The tiny device relays by audible beeps the function of the heart of a patient undergoing surgery. The device is strapped to the patient's arm and frees the eyes and hands of those assisting in the operating room. •

Ritzy Razors

Plain or fancy—take your choice—and pamper your beard with one of these shaving machines.

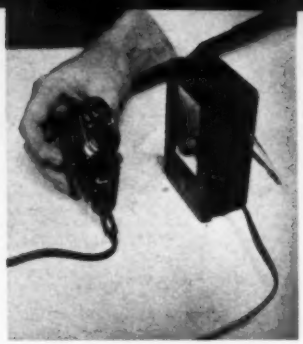
AUTO SHAVE is designed for men on-the-go. Shaver is the Remington Auto-Home Rollectric. It comes with a special pre-shave talcum, adapter that plugs into cigarette lighter on 12-volt system cars. $34.50.

GOLD-PLATED, one-piece Gillette adjustable razor has nine settings which cater to light, close or extra-close shaves. Price is $10.

COMPACT travel safety razor's handle telescopes. Unscrewed, smaller one fits inside the larger one. Hoffritz Cutlery, New York, N. Y. Price: $1.95.

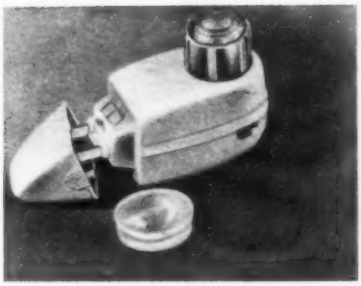
THORENS Riviera Shaver comes with two heads—one for normal shaving; one for beards, mustache trimming, etc. You wind motor via key on back for two to three minutes of shaving. Hoffritz. $17.50.

CASTAWAY one-time-use job includes soap, towel, cream and razor for 35 cents. Rochester Razor, Rochester, N. Y.



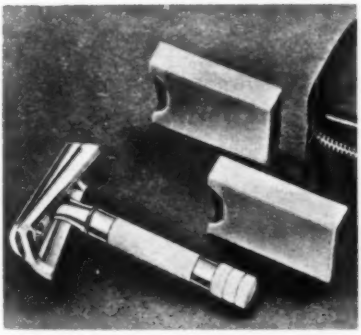
NORELCO Sportsmen has a double head and brisk rotary action. It operates via three one-and-one-half-volt flashlight batteries. Hoffritz. Price: $24.95.

LORD RIAM works for up to five months on a set of flashlight batteries. Large, triple-blade rotary shaver costs $12.95. The batteries are included in price.



ROYALMATIC Deluxe dry shaver operates without wires or batteries. You simply plug it in electric outlet for a few hours to recharge it. $19.95.

ROCK the Wilkinson Dry Shave Razor over your face and you shear your beard. It automatically sharpens itself and fits contours of face. The Wilkinson Sword Company, Ltd., London, England.



DIAGONAL safety razor has screw knob on handle-end to release, secure the blade. It comes with leather zipper case and four blades. $5. Hoffritz.

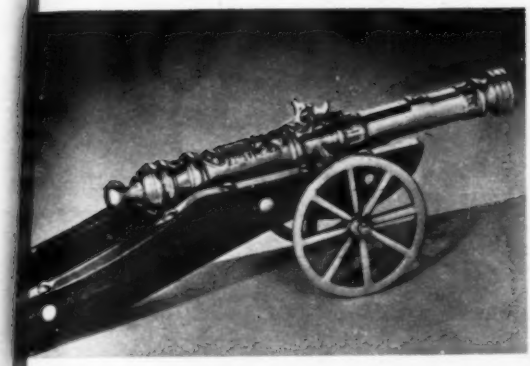
STRAIGHT razor gives best shave of any type razor but can be dangerous in the hands of an amateur. It has rounded end to prevent cutting yourself when shaving sideburns. $8.50. Hoffritz.

These Refrigerators Are Really COOL

HERE'S what your refrigerator *could* look like! GM of France recently hired artists Labisse (top), Capuletti (below left), Atlan (center) and Carzou (right) to decorate standard Frigidaire cabinets. The colorful results were then sold to raise money for French children's aid. •

PAPER BOAT

SOMETHING new in the corrugated box industry is the development of wax impregnated, water resistant paper board—used in the packaging and shipping of fruit and produce. Hinde & Dauch of Sandusky, Ohio, displayed the collapse-proof character of their new box material by making a boat of it, complete with sail. It leaked nary a drop. But sorry—no paper boats for sale; not yet anyway. •



17th CENTURY CANNON

THIS beautiful miniature reproduction of a 17th century cannon has solid brass wheels and barrel with wooden mounts. Made in Holland, the 13-inch long cannon is a collector's item. Price: $12.95. Giftware Co., New York City. •

GLASS BALL AQUARIUM

TWO live tropical fish in a baseball-size aquarium make an unusual mail order item. The glass ball sets on a plastic base, for use as paper weight or desk ornament. There's enough fresh air in the globe to insure live delivery. Price is $2.98 from the Exotic Fish Co., Hollywood 28, Calif. •

HEAT-AND-MASSAGE CHAIR

THIS push-button armchair does everything but light your pipe. Not only does it provide gentle heat for your tired frame, but two motors give you an overall massage. Niagara Therapy Corp., Adamsville, Pa., makes it. •

PRE-COLUMBUS coin is thin bronze hoe, once used as money in Aztec, Mexico.

MASSACHUSETTS Pine Tree sixpence of 1652 is worth about $40 in fine condition.

U. S. $50 gold piece minted for Panama-Pacific Exposition. Value: about $1,850.

HOW TO COLLECT COINS

By George Laycock

ONE of the fastest growing hobbies in the country is coin collecting. Coin dealers estimate that there are now about 2,500,000 collectors in the country —twice as many as five years ago.

Why are more people than ever before looking for rare coins? One good reason is that collecting money is a fascinating hobby, rich in history and filled with unexpected surprises. The other is that it can be profitable—on occasion, highly profitable. Here's one hobby you can cash in on.

One coin collector got the idea that banks storing rolls of coins on their shelves might have some rolls pushed to the back where they would be hidden for years. With permission from banks he searched shelves throughout his section of the country. One day in a small country bank in Kansas he discovered a dust-covered roll of the rare 1909 San Francisco Indian head cents—50 of them, and the market price at the time was $30 each!

It's hard to tell where you may find a collection of rare coins. Near Columbia, S. C., three guards and 20 convict laborers working on a church foundation uncovered a jar of rare three-cent pieces, half dimes, quarters and half dollars, all in fine condition.

How can you begin collecting coins? You may have the start of a collection in your pocket. Seasoned collectors say the best plan is to start with common coins such as recent Lincoln-head cents or Jefferson nickels.

Check to see if there is a coin club in your community. There are about 400 such clubs throughout the country. You can learn a lot about coins by talking with other collectors. Coin collectors have their own national organization, the American Numismatic Association, which publishes its own magazine, The Numismatist. The address is Lewis M. Regan, P. O. Box 577, Wichita, Kan.

You'll want to know what coin collectors mean by some of the terms they use to describe coins. Coins are classified as proof, uncirculated, very fine, fine or very good. Proof coins, which have a mirror-like surface, are specially minted for collectors. Uncirculated coins are [*Continued on page* 182]

TEN RARE U. S. COINS

1913 Liberty head nickel, worth $10,000; 1870 S $3 gold piece, $9,000; 1822 $5 gold piece, $14,000; 1796 half dollar, $1,500; 1794 silver dollar, $7,000; 1876 Carson City 20-cent piece, $5,000; 1894 S dime, $5,000; 1827 quarter (original), $2,500; 1854 S $5 gold piece, $6,000; 1907 very high relief $20 gold piece, lettered edge, $15,000.

$20 gold piece, 1907, was designed by St.-Gaudens. Proof copy worth $1,200.

HALF CENT made of copper and struck in 1853. Fine copies are $3.75; uncirculated, $12.

REGULAR issue of 1796 U. S. half dollar. Worth around $575 in fine condition.

SMALLEST AND LARGEST coins are ancient Greek Obol, 19th Century Chinese 1,000 cash piece.

NAUTICAL NIFTY is boat hull on Austin chassis, uses anchor for parking. Cor blimey!

LIMEY LUNACY

The British come up with a bundle of barmy inventions.

BUTT HOLDER, right, keeps smoke out of those dreamy British eyes. Below right, note gadgets affixed to girl cyclist's arms. They are directional signals working from grips on the handlebars. Creampuff in two photos below is demonstrating alarm bed that whips covers off at pre-set time. Merrie England!

MAKING A CARTESIAN BOTTLE

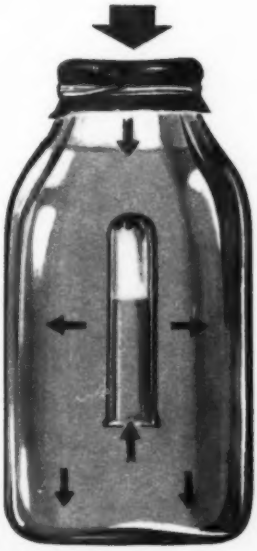


DIAGRAM SHOWS how pressure on the diaphragm exerts pressure on the water in all directions. Water is forced up into the tube, compressing the air in it and decreasing its buoyancy. Then it sinks.

THE famous Cartesian Bottle, named for French scientist Rene Descartes (1596-1650), is a scientific device that's as much fun as a toy. To make MI's version all you need are a quart milk bottle, a test tube, a piece of light rubber about five inches in diameter, and a rubber band.

Fill the bottle with water to within about an inch of the top. Then fill the test tube to the brim and quickly plunge it, open-end first, into the milk bottle. With your right index finger hold the bottom of the test tube just below the surface. With your left hand, cover open end of the milk bottle with the piece of rubber and pull it down around the neck. Then wrap the rubber band around it to make it air-tight.

Your piece of rubber is now a diaphragm and the pressure of your finger on it will compress the air inside the bottle. Press down and the test tube sinks; let up and it rises. The game is to control the movement of the little "diver" so that he will ascend, descend or hover. If he sinks like a stone on the first try, you have too much water in the test tube.—*Mike Bienstock*

FACE-LIFTING MT. RUSHMORE

ONE TWITCH of that noble nose could send this human fly to his doom except for the slender rope that he hangs by (see shadow along bridge of nose).

WHEN spring rolls around in the Black Hills of South Dakota, a four-man crew ventures forth to do a week-long face-lifting job on the four stone faces on Mt. Rushmore. No major repairs have been necessary since 1941, when sculptor Gutzon Borglum finished his 14-year task, but maintenance chief Glen Jones and his men do a hard, dangerous job of crack-filling. It's hot work, too—only windless days will do and the temperature often soars to over 100° •

THIRD MAN SUNS while others work: he goes along as a relief in case of illness. At right, Jones takes a break standing on the Emancipator's chin whiskers, leaning against lower lip.

PATCHING MIXTURE—white lead and stone dust—must be lugged up to the presidential brows. Many climbs and descents must be made before the real work on the faces begins. Right: the long climb up.

MONEY MAKING IDEA

HE SELLS SMELLS

By Bob Willett

THE smells Paul Howard, Jr. of Garden Grove, Calif., sells are not the kind girls use to drive men mad—but many work the same way. National Buck Scent, for instance. Put a little N.B.S. on your heels and walk in the woods; before you can say Walt Disney, there's Bambi right behind you.

Other Pacific Coast Scent Co. products that work that way are a number of trapping scents and a marvelous fish scent that brings underwater Romeos from all around. Fishermen who have been fishing without luck all day have then tried National Fish Scent and made fabulous catches. "We put sex appeal into fishing," states Mr. Howard.

Not all of Howard's scents are designed to lure lovelorn fauna within trap, bullet or hook range. A housebreaking scent, put in a convenient place outdoors, stimulates puppies mightily *when you want them stimulated,* gets them accustomed to using nature's great rest room. Another scent keeps dogs off garbage pails, rose bushes, white sidewalls and the like. Animal scents can be used to larn the hound not to run certain game—because he's so sick of the scent he hates it. Gun dogs training with dummy birds get a fuller education if the dummy is scented, and hounds get good workouts on artificial trails.

Some of the scents Howard sells were put on the market by his father back in 1928 when Paul Sr. was a banker in Cilhowee, Mo. Paul Sr. and a government trapper together made up a big batch of Shultz Animal Compound, a coyote-fox-wolf combination.

Paul Jr., a self-taught chemist, decided to go into the scent business in a big way in 1950, while working for an oil company in California. About $200 put him in business as a part-timer working in his own home on a "Scram, Rover" odor. He produced a good canine repellent but it wasn't a commercial success until he put it on his Dog-Wick, which retains the scent.

Howard's first year in the animal scent business brought in $10,000. Nowadays he grosses ten times that annually. For Paul Howard, scents that make sense make dollars.

EYE STOPPER

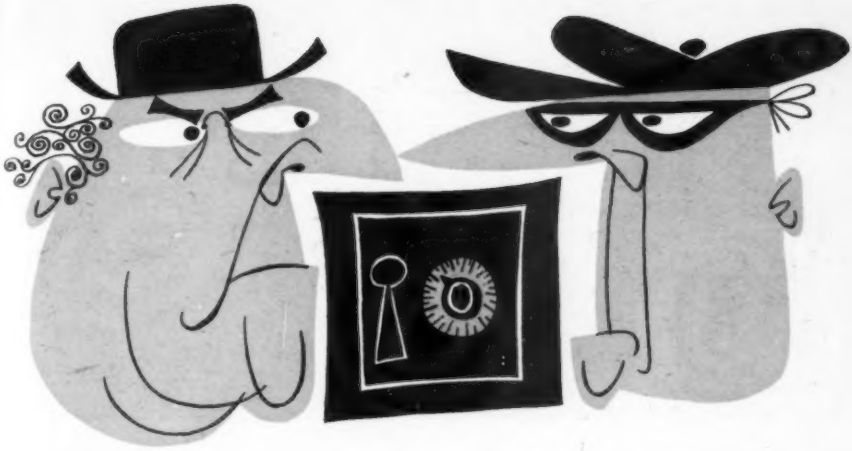
WHIPPER-SNAPPER Kid Young amazes Australian audiences by flicking a small coin from the tongue of his blonde partner, Irene, with a 25-ft. whip. Fast camera catches the action.

THE FINE ART OF BOX BUSTING

By Carl Sifakis

LAST February there were several highly indignant New York City newspaper readers. They seethed with rage because they were called "yeggs" in print—the dirtiest word in the safecracker's dictionary. True, the safecracking at the Steak Joint in Greenwich Village hadn't been the biggest caper in the world—the take amounted only to a modest $15,000 or so—but the job was a work of art.

The looted safe had an eight-inch steel front and was set in solid concrete and, because of its "burglar-proof" character, was entitled to extra-low insurance premiums. Yeggs never would have tackled it. They wouldn't have gotten past the tricky alarm set-up which the expert crooks handled with professional nonchalance. The impregnable double steel safe doors were a mass of jellied metal when detectives arrived. They said the job was of such professional caliber



SAFE-MAKERS match wits with most skillful, cunning artists in the world—safecrackers.

that not more than five or six men in the whole country could have handled it!

Admittedly, it's tough sledding these days for a self-respecting safecracker, the cream of the underworld, because of the many bungling yeggs who give the profession a bad name. Like the New Jersey bums, for example, who had the gall to consider themselves boxmen and tried to cut open a safe with acetylene torches. They used the wrong kind and welded the safe permanently shut. Or the Midwest torchman who burned his way into four straight safes and didn't net a dollar. He fried the paper money to a crisp.

If these were typical box busters, safe makers could put out products of sardine can variety and label them burglar-proof. But safe manufacturers are up against the most skillful, resourceful and cunning artists in the world of crime. Every new strategem the makers devise is soon countered by a still more brilliant move by the connoisseurs of the metal box.

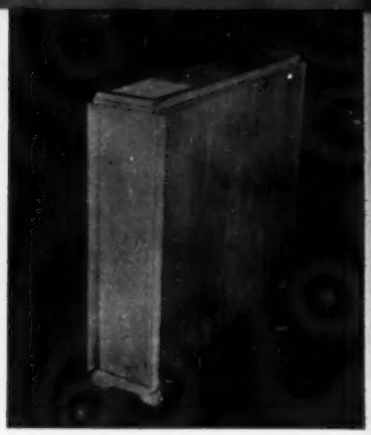
There are actually far fewer manipulation-proof safes on the market than manufacturers claim—but there never was and probably never will be a man who can manipulate every combination lock made. Even top-flight performers like Joseph L. Biancolo and Robert S. Murray, two honest New York professionals, don't claim to be able to open more than 70 or 80 per cent without any tools. They and perhaps three or four others, all legitimate safe experts, have the magic touch. Sandpaper? Never! Says Biancolo: "If I sanded my fingers to manipulate a lock I'd be on my tenth set of fingers by now."

It takes years of practice and an intimate knowledge of combination locks, thousands and thousands of them, to get to be able to do magic by manipulation. Just look at the mathematical complexity of a combination lock, possibly the [*Continued on page* 185]

INEPT CROOK scorched four safes, didn't net $1: he fried paper money to a crisp!

DISAPPEARING TABLE

DISAPPEARING table seats six people when unfolded and can also be used at half-size.



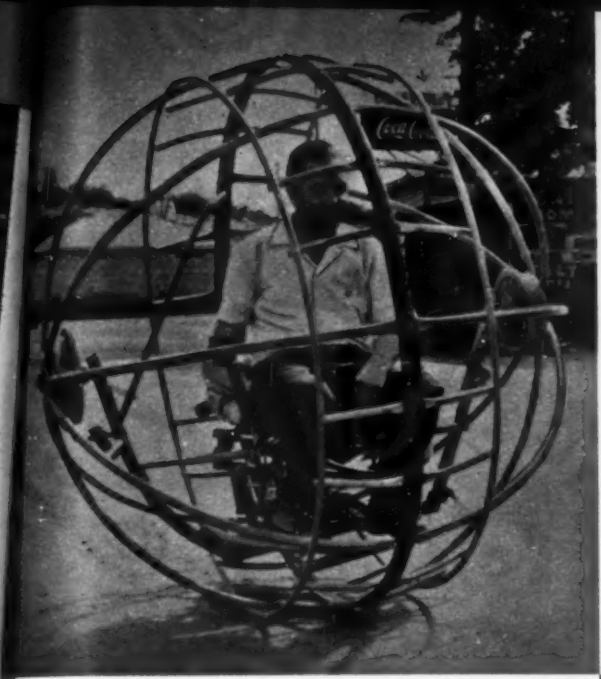
FOLDED, table is only six in. wide and is easy to store in smallest apartment.

NOW you see it, now you don't—the table, that is. This disappearing table was invented by Jose Oscoz of Bilbao, Spain and is designed for big people living in small quarters. The five-ft. ten-in. long table seats six persons comfortably yet folds up neatly to a compact six-in. wide package for easy storage or shoving against a wall. It can also be used at half-size with one flap folded down. The 15-lb. table costs about $462. •

MAGNIFICENT MINIATURES

MINIATURE magnificence crafted by Rex Hays, Britain's premier maker of scale model autos, has been rolling out of Sussex county for many years. Some 200 precise, Hays-made autos are in the hands of collectors. Hays' models range from five to eight in. in length and have sold for over $1,000. •

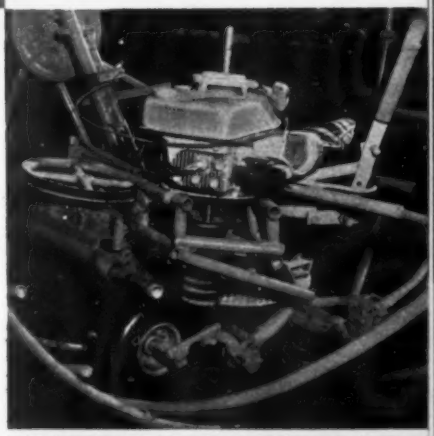
MERCEDES-BENZ SSK, left, was made by Hays for the late King Faisal of Iraq. Grand Prix winners above are 1906 Renault, 1958 Vanwall.



SQUIRREL CAGE CAR

INVENTOR originally built vehicle to show atomic magnetic motor he is developing. Experimental squirrel cage has lawn mower motor, below.

INVENTOR, pilot and engineer, Herman P. Anderson of Allisona, Tenn., thinks big—and round—as you can see from the space age auto he contrived which bears a strong resemblance to a ball. Powered by a three-hp lawn mower engine, Anderson forsees his revolving vehicle developed for air (with helicopter rotors), water and land use. Future models, it is hoped, will be Plexiglas covered, stand six ft. tall, have an 18-ft. circumference, do 200 mph and weigh 500 lbs. Quite a ball! •

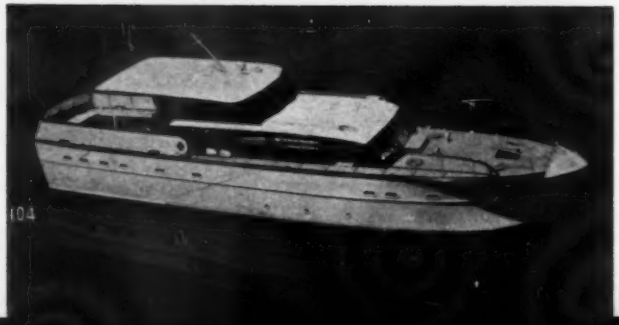


POWER transmitting wheel and power axle riding on tire, right, operate tubular cage, below.

BOATS IN THE AIR

FIVE-FOOT TUG operating on a six-meter radio band tips scales at 100 lbs., can do six mph.

MODEL MISSOURI is 55 inches long, operates on a multi-channel band, took six months to build,



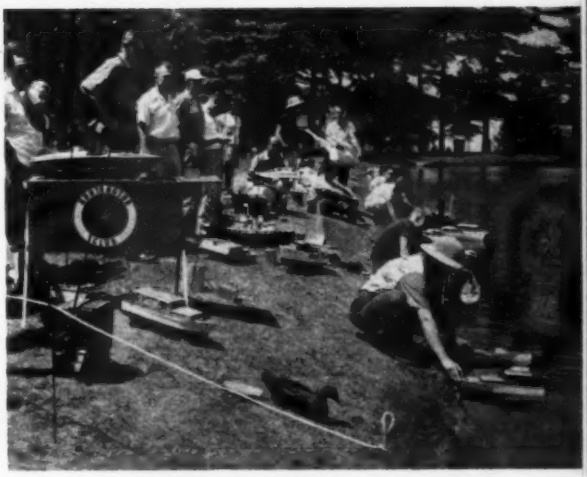
CHRIS-CRAFT cruiser, 40 inches, has complete interior lighting system under operator's control.

DUCK'S BACK cleverly conceals a gyro receiver. Glenn Thornan, Huntington Station, N. Y., built the bird.

CONTESTANTS from three states took part in radio boat competition sponsored by the Huntington boat club.

MOTOR SAILER (bottom left) has an attention-getting feature: a sail that appears to raise and lower itself.

FOR radio-controlled model boat men, nothing rivals putting a model through its paces, watching your tiny craft sail taut, yare and pretty as a picture while you stay dryshod on the brink, fiddling the control. The Huntington (N.Y.) Radio Control Club recently sponsored a competition for three classes—kids, single channel and multi-channel. Some of the boats showed delightful ingenuity in the modelers: bells and lights that signal each change, interior lights that go on and off, sails that are raised and lowered by unseen deckhands. Boats were judged on both beauty and performance. •



HYDROPLANE, 46 inches long with a 20-inch beam, took one year to build, can do up to 60 mph. Built of wood and Fiberglas.

PEDAL PUSHER

OLD folks can roll merrily along over hill and dale on a unique pedal pusher, the Oto-Pedal, devised by Spanish inventor Fernando Ruiz Luciarte who lives in Paris. The plastic vehicle weighs only 58 lbs. and can do 25 mph. You can drive it for hours without getting tired, claims the inventor. The pedal pusher's back wheels have brake drums and the lights run off a dynamo. The patented car is being made in Paris. Price: about $84. •

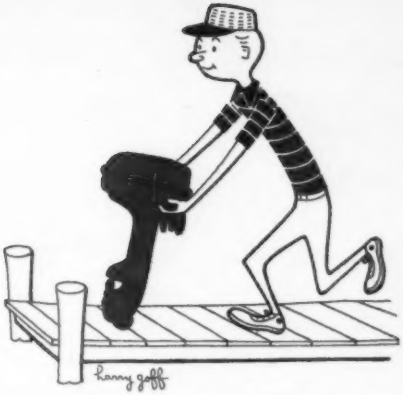
WORLD'S FASTEST "TYPIST"

SPEWING 3,000 words per minute, a fantastic new teletypewriter developed by the U. S. Army and Burroughs Corp., of Paoli, Pa., types four full lines of text a second! It has a potential top speed of 500,000 wpm. Faster than any secretary, it is not quite as shapely. •

GERM-FREE PHONES

GERMS are wiped out by the bactericidal radiation rays in the Westinghouse Sterilamp tube which is built into this new phone developed by Danco Telephone Co., Inc., of New York. Each time the receiver is put down, the user's germs are destroyed. •

RAKE COMBER would allow you to push a handle and comb rake free of leaves and twigs. Dan Ingersoll, Chestertown, Md.



BOTTOM WHEELS on outboard motors make transport easier. Wheels could be put on by wing nuts. Daniel Ursitt, Joliet, Ill.

ICE TRAYS that allow thirsty man to take out one cube at a time would end kitchen struggle. John Emery, Fort Collins, Colo.

INVENTIONS WANTED!

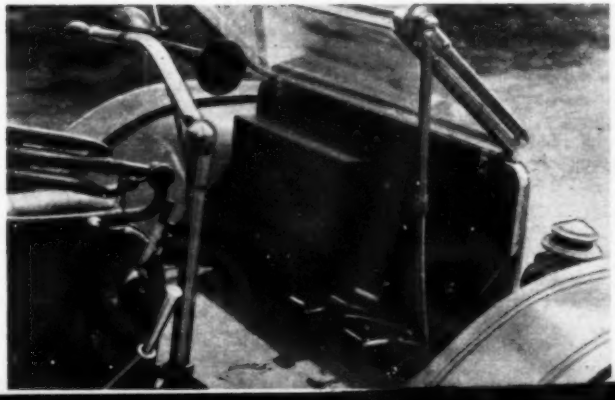
Is there a gadget you think should be invented? If so, send its description to Inventions Wanted Editor, MECHANIX ILLUSTRATED, 67 West 44 St., N.Y. 36, N.Y. Each one printed will be awarded $5.

JOINTED OARS that snap apart could be carried in car trunk with ease, assembled quickly. Charles Kimball, Otisville, N. Y.

TRAMPOLINE BEDSPRINGS on kids' beds would enable the tots to try tumbling at home. Charles Esterly, Staten Island, N. Y.

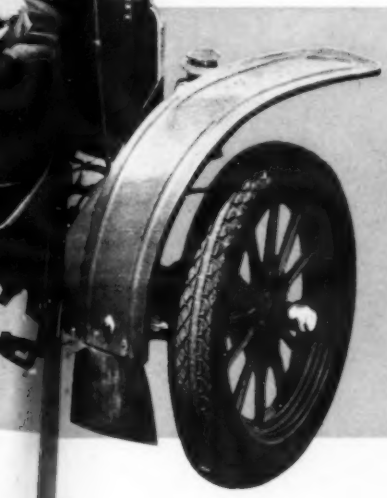
3 WHEELING

INVENTOR of three-wheel Motorette, Kelsey is now 81 and is a retired manufacturer of gardening and small farm machinery.

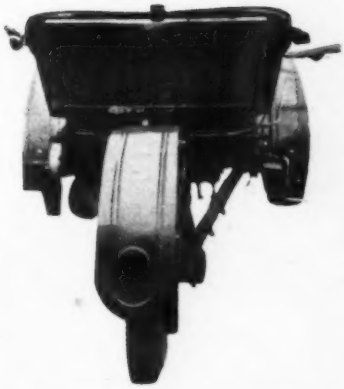


STEERING is done by tiller which folds up and out of way when driver gets out. It has honk horn, carries four gallons of gas, cruises at 15 mph, gets 20 mpg.

THE car that might have been is the three-wheel Kelsey Motorette designed to compete with the Model T Ford in 1910. The three-wheeler got over the ruts that passed for roads with surprising ease. A two-cylinder, 10-hp engine gave the car a top speed of 20 mph. Inventor Carl W. Kelsey put it on the market for $385 but a faulty motor casting and lack of capital to develop the car were obstacles that could not be overcome. But it might stir fond memories. •



CHAIN DRIVE from planetary transmission drives a large sprocket on its single rear wheel.



REAR RADIATOR has no fan or pump. It is thermo-siphon type cooling system.

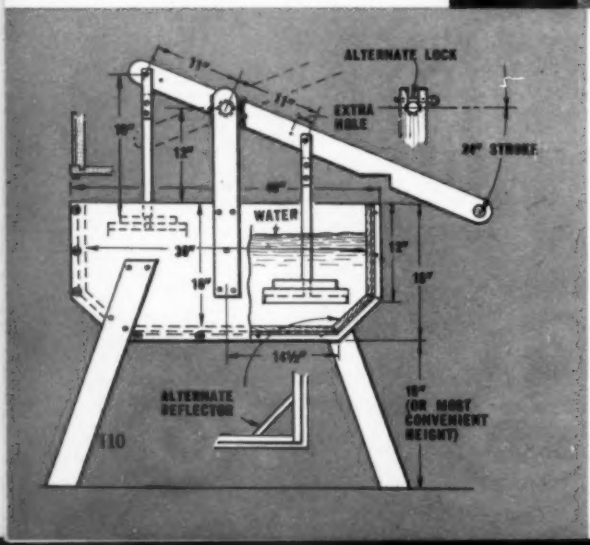
MOTOR is under seats. Planetary transmission has two forward speeds—high, low—reverse.

THREE-DOLLAR

WASHING MACHINE

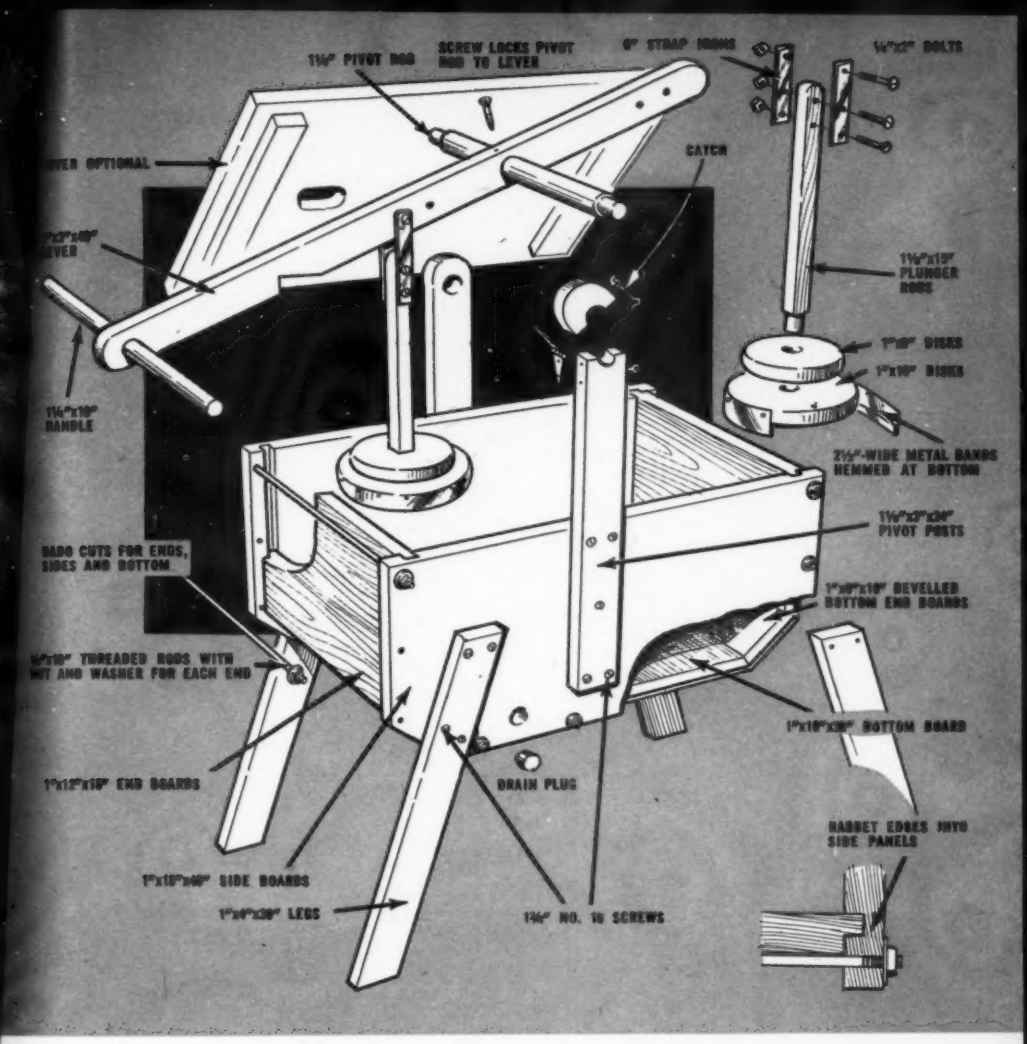
Having brightened up foreign costumes, the ICA's $3 washer comes home to empty our own lake-cabin hampers.

PLACE CLOTHES in tub, then fill to water line with hot, soapy water. Operate the lever at about 50 strokes per minute for 10 to 15 minutes to do one wash.



THIS hand-operated washing machine was originally designed by the International Cooperation Administration in answer to numerous requests from its overseas mission for a device to replace primitive laundry methods still practiced in many parts of the world. Yet many Americans who vacation at lake cottages or mountain cabins in non-electrified areas will also be able to put this sturdy clothes drubber to use.

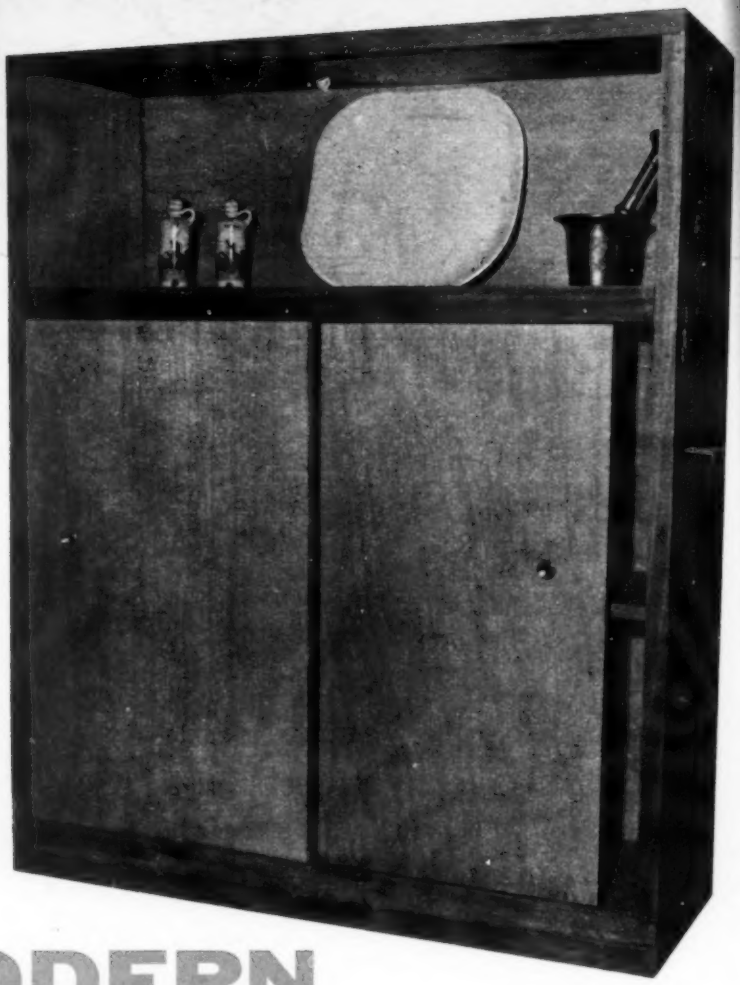
Mechanix Illustrated



Build the machine of oak or other sturdy wood by following the accompanying diagrams. First cut all pieces to size, then assemble them in one operation. Caulk the seams between end and bottom members with vegetable fiber. The washer is operated by see-sawing the lever to impose a piston action on the plungers. When not in use, keep some water in the tub to prevent shrinkage of the wood. Rustic but rugged, this washer will do a bang-up cleaning job. •

HOMEMADE, manually operated washer will do a cleaning job comparable to electric machines.

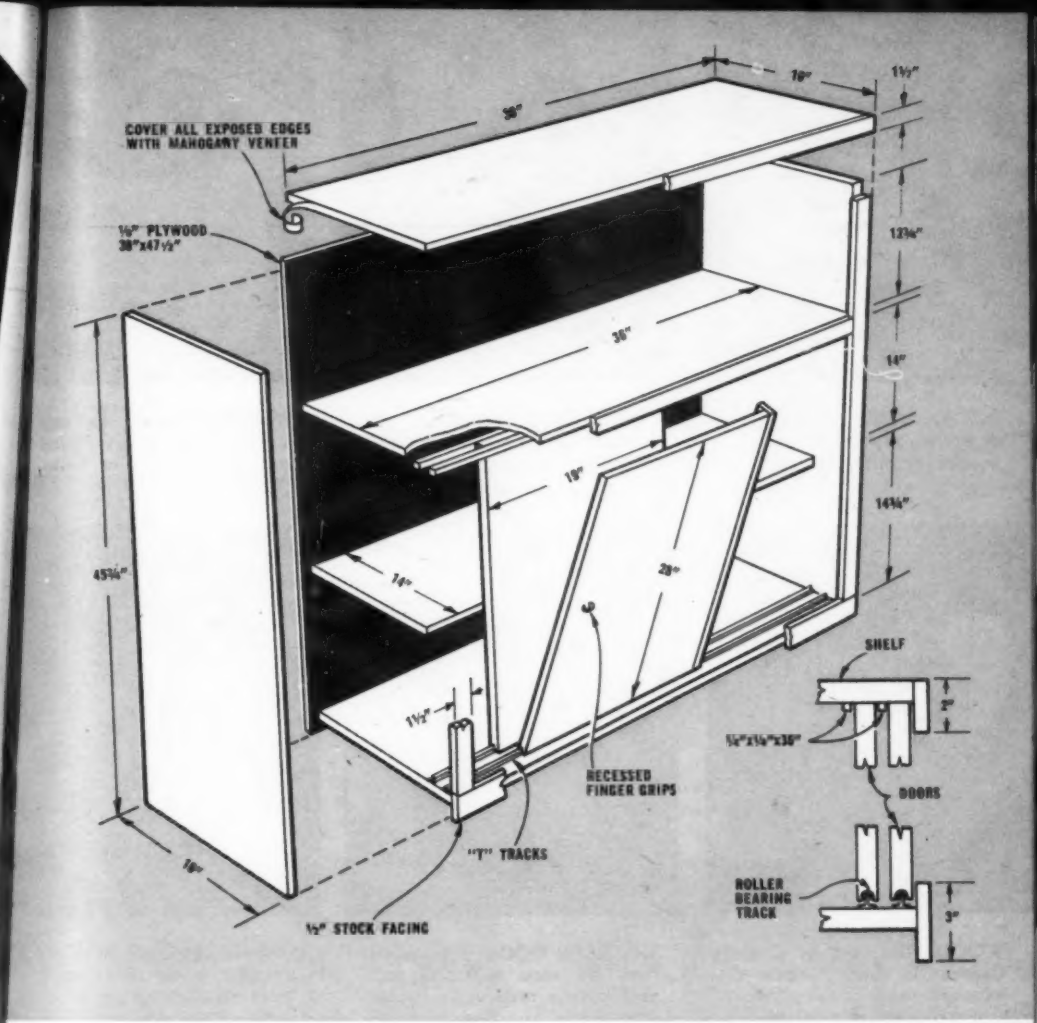
Build It...



MODERN BREAKFRONT

THIS handsome china storage cabinet with sliding doors is a piece of furniture that will be especially appealing to the young, modern housewife. The entire unit is made of Philippine mahogany, a comparatively inexpensive grade of lumber yet as rich-looking as the more costly veneers. To make a natural display area for interesting china and knickknacks, the top portion is left open; below, two sliding doors run on "T" tracks for finger tip movement. The interior is divided into two equal sections and can be used for storing a complete set of dinnerware or other utensils.

Construction is really quite simple and the piece can be made without too much skill or experience in woodworking. Except for the back panel, which



CIRCULAR SAW serves to cut top, shelves, sides, moldings, sliding doors and back panel.

DOOR IS SLOTTED on underside for roller bearing; first bore holes, then chisel out excess.

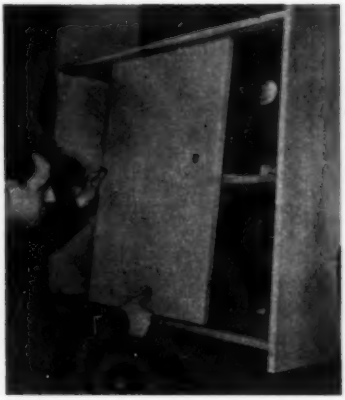
ROLLER BEARING fits snugly in the slot and is secured with a pair of flathead nails.

DOOR GUIDES are ripped out of mahogany stock, nailed to bottom of shelf above doors.

"T" TRACKS are cut to correct inside length with hack saw, then nailed in position.

COUNTERSET every nail and then, using mahogany Plastic Wood, fill in all the holes.

WOOD-TRIM, set in Contact Cement, is used to cover the exposed edges of the plywood.



THE REAR DOOR is installed first; be sure that the roller bearings rest on the track.

MOLDING which has been cut from solid stock is fastened to front with finishing nails.

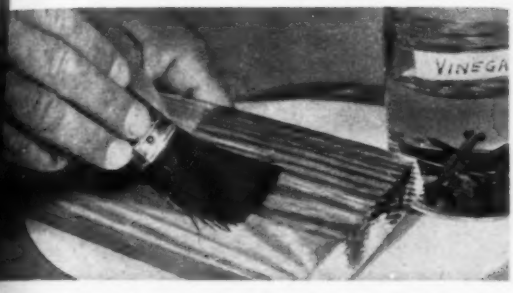
is ⅛-inch thick, ¾-inch plywood is used. Butt joints are used throughout, with glue and nails doing the holding. Finishing nails serve well in the ¾-inch stock, 1¼-inch common nails hold the back panel and 1¼-inch finishing nails secure the molding. All exposed plywood edges are covered with mahogany Wood-Trim, held in place with Contact Cement to avoid clamping. After assembly, the unit is lightly sanded in preparation for the finish.

A clear or stained finish may be used. For a clear finish, proceed as follows: After the unit has been sanded and dusted, a wash coat of shellac is applied. A wash coat is a very thin solution of alcohol and shellac. Its purpose is to seal the pores of the wood. Allow the shellac to dry for from one to two hours. Using No. 00 steel wool, rub the entire unit until it feels smooth to the touch; then dust it off and apply two more coats of shellac diluted with alcohol (use 60 parts shellac and 40 parts alcohol). Rub down after each coat.

For a hard, durable finish, apply three coats of varnish, sanding lightly between each coat and rubbing down the last one with pumice stone and linseed oil. Top it off with a coat of wax for a soft, lustrous finish. •

FRESH PAINT TIPS

SCREENING sandwiched between rim and hoop of Kemtone can serves as a paint strainer.



NAILS immersed in vinegar for 24 hours turn the liquid into a soft gray wood stain.

PAINT and varnish remover won't drip on vertical surfaces, is nonflammable.
du Pont Co., Wilmington, Del.

BRUSH CADDY opens can, holds brush, and serves as a brush wiper and drip protector.
EU Mfg. Co., 639 Baltimore Pike, Springfield, Pa.

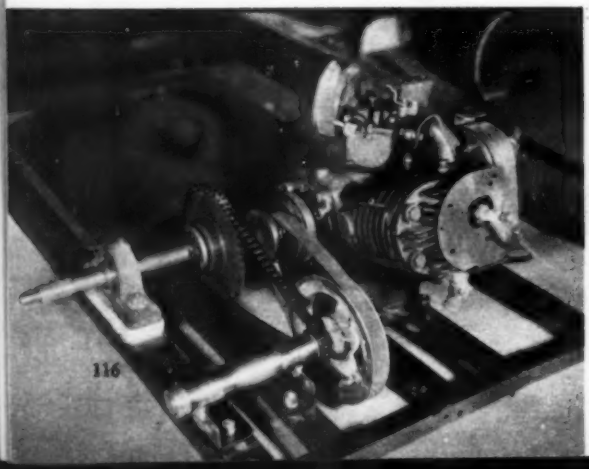
SPRAY SHELLAC in aerosol can is ideal for small touch-up and refinishing jobs.
Wm. Zinsser & Co., Inc., 516 W. 59 St., New York, N. Y.

Midget Sports Car

Fair warning! Don't let your kids see this story!—

or you'll find yourself in the midget car business.

By Paul Wagner

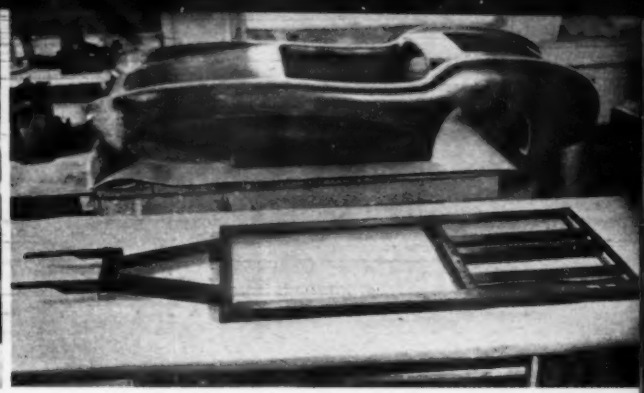


MAYBE we should have titled this story How To Flabbergast The Short Pants Set—because the youngster who finds this snappy, pint-sized roadster beside his Christmas tree or birthday cake will be certain you are a mechanical magician disguised as an ordinary mortal.

Actually, you don't have to be a

CONTINENTAL, single-cylinder, two-hp lawn-mower engine powers the car.

ELECTRIC-WELD construction of angle-iron frame sustains vibration caused by engine.

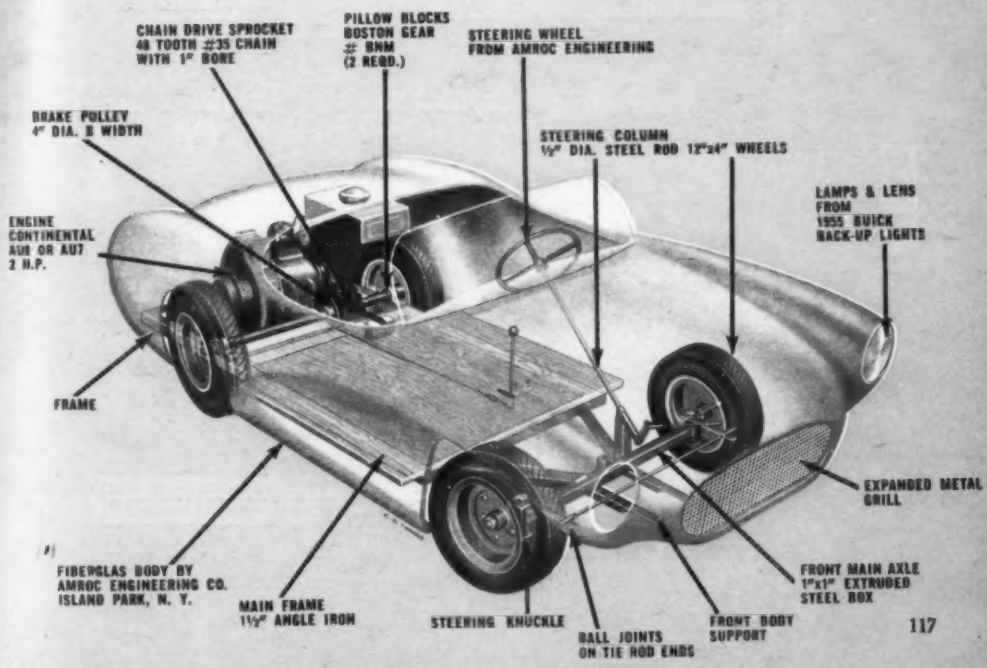


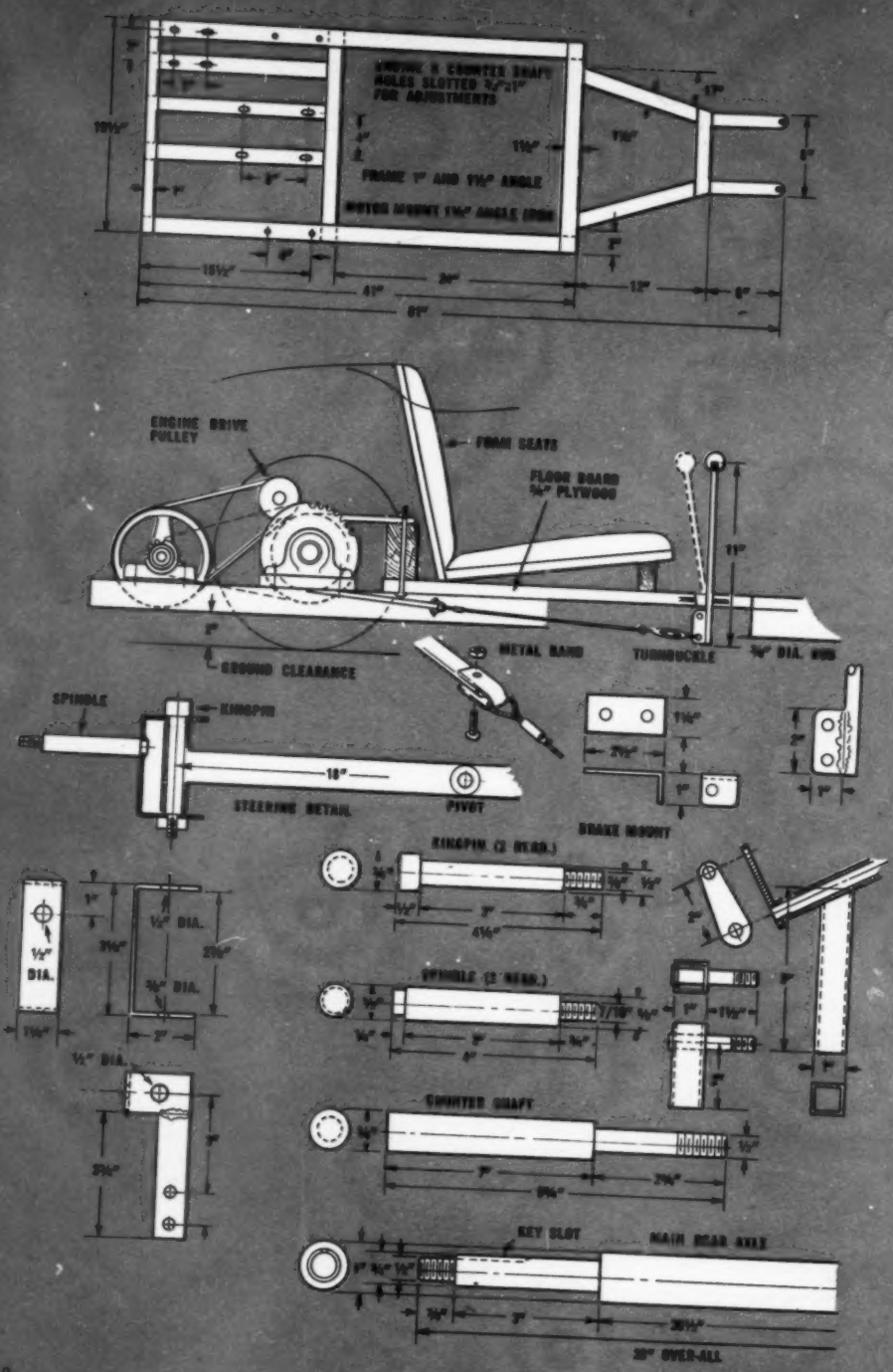
COMPLETED FRAME and preformed Fiberglas body are now ready to be assembled.

magician, mechanical or otherwise, to build this elf's delight of a sports car. So, if you'd like to really thrill your moppet with a plaything he'll remember the rest of his life, then continue on to the construction details.

Chassis. The chassis of our little sports car is of 1¼x1½-inch angle iron except for the front extensions and the rear cross-member. For these, we used 1x1-inch angle because the wider material was unnecessary and the additional clearance provided by the narrower material was desirable. All the heavier angle was used with the wider side facing up to provide maximum width mounting surfaces for the car's components.

As a first step, cut all angle-iron sections to size and lay them out for as-




ENGINE & COUNTER SHAFT HOLES SLOTTED 3/4"x1" FOR ADJUSTMENTS
FRAME 1" AND 1½" ANGLE
MOTOR MOUNT 1½" ANGLE IRON
ENGINE DRIVE PULLEY
FOAM SEATS
FLOOR BOARD ¾" PLYWOOD
GROUND CLEARANCE
METAL BAND
TURNBUCKLE
¾" DIA. ROD
SPINDLE
KINGPIN
STEERING DETAIL
PIVOT
BRAKE MOUNT
KINGPIN (2 REQ'D.)
SPINDLE (2 REQ'D.)
COUNTER SHAFT
KEY SLOT
MAIN REAR AXLE
20" OVER-ALL

sembly. The sections are then welded together with overlapping joints at the corners. Square-cut the corners and overlap the joints for ease of fabrication and for greater strength. You may not have the facilities for doing your own welding so it is suggested that you first assemble the entire chassis, using screws or bolts to hold the sections together, and then have it electrically welded by a professional. It is essential that the chassis be assembled with welded joints because of the normal vibration created by the car's single-cylinder gasoline engine.

The body is mounted to the chassis only at the ends. Its sides are supported by the floor board which rests on the chassis rails and which is sufficiently thick to provide additional support to the angle-iron framework. The body bolts to the under side of the floor board leaving the interior of the car free of projections such as brackets, angles, etc.

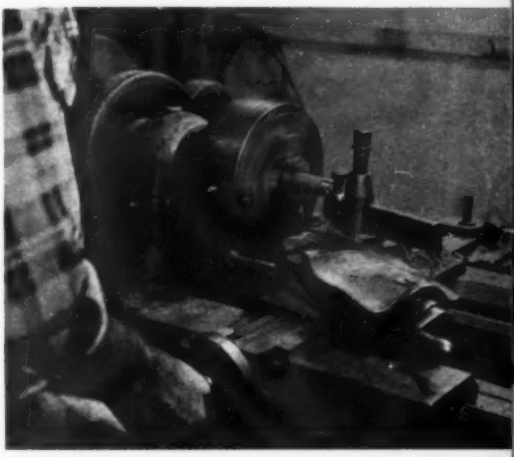
Body. The car's 67-inch prefabricated body was purchased from the Amroc Engineering Company of Island Park, N. Y., for a little under $60. You can take your choice of one of two types; both are the same in appearance, construction and weight (22 lbs.) except that one has a removable deck lid whereas the other is solid. The solid body is usually used where electric or pedal power drives the car. However, when a gasoline power plant is used ease of accessibility is an important factor in starting and servicing the engine, so the body featuring the removable deck is preferred.

All Amroc bodies are supplied without the rear wheel cutout. This permits the individual builder to decide on what type of wheel opening he would like. We decided to use the full-circle cutout in order to give the car a more balanced appearance. This was easily accomplished using a saber saw.

The car's headlights utilize lenses from a pair of 1955 Buick back-up lights together with flashlight bulbs and reflectors. The tail lights are red automobile clearance lights. The horn is the same type used on bicycles.

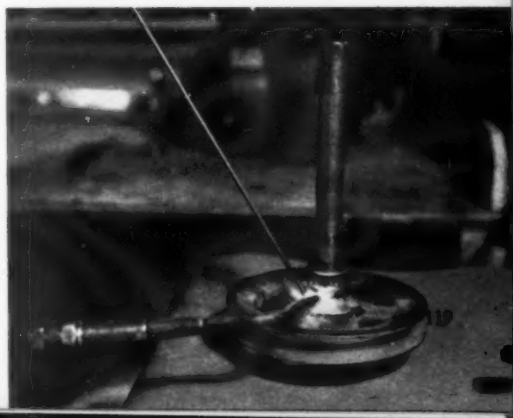
The Amroc steering wheel is of cast aluminum, the windshield of Plexiglas, and the upholstery of whatever material you choose. Finishing the body re-

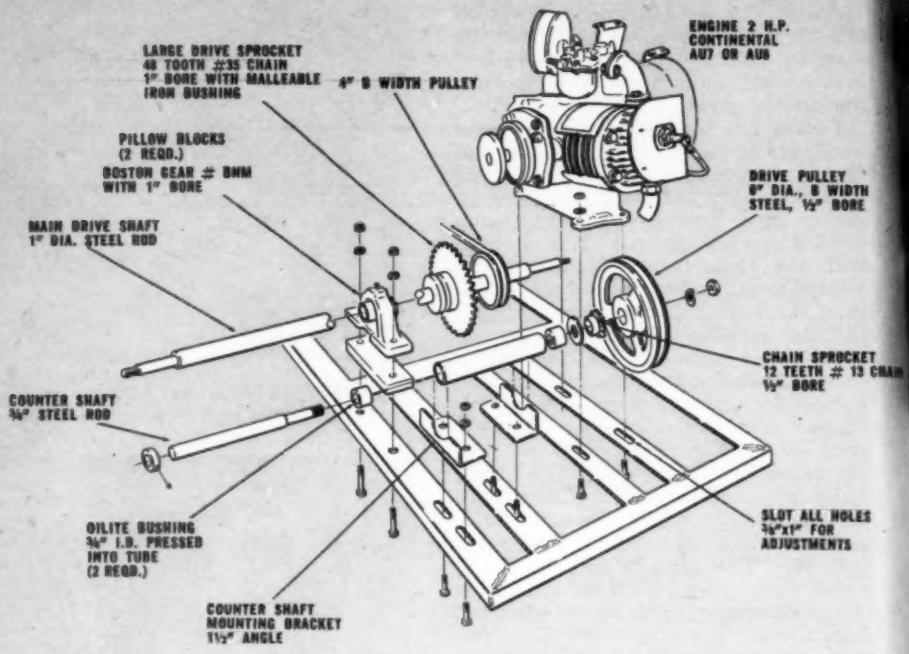
ASSEMBLY DETAILS can be seen in this shot of front axle and steering mechanism.



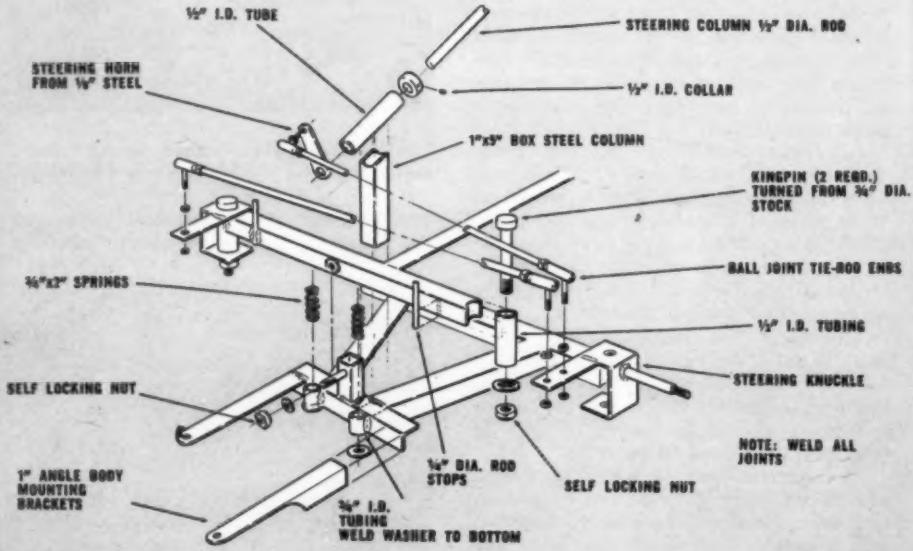
FRONT SPINDLES, turned from ⅝-inch stock, are same diameter as wheel bearings.

SMALL SPROCKET and steel pulley on the countershaft must be welded together.





ABOVE. Exploded sketch shows rear frame, engine and drive assembly.
BELOW. Detailed diagram of the front axle and steering mechanism.



LIGHT SANDING of molded body roughens it sufficiently to allow paint to adhere.

REAR WHEEL CUTOUT design is up to you; bodies are built without this cutout.

quires only a light sanding to roughen its smoothly molded surface so that the paint will adhere. After sanding, spray on a coat of automotive primer, then follow up with a finish coat of lacquer or enamel.

Suspension. The car's suspension is solid in the rear and semi-sprung in the front. Actually, in a small car of this type which is not subjected to high speed cornering, a solid suspension all around would be satisfactory. We suspended the front only to insure that all four wheels would distribute the car's weight equally. Cars of solid suspension often have a tendency to weigh heavily on three of the wheels while the fourth wheel barely touches the ground. This problem is eliminated by the use of a pivoting-type front end. The actual weight-supporting points then become the two rear wheels and the center of the front axle. The two springs under the front axle merely provide a leveling tension that keeps the axle from [*Continued on page* 156]

TO PAINT, spray on automotive primer, then follow up with enamel finish coat.

REMOVABLE deck lid makes engine accessible for both starting and repair chores.

Golden Hammer Award Winners

20-FOOT CRUISER with 7½-foot beam has mahogany framing and Fiberglas-plywood hull. It was built in nine months by Lt. Col. Theodore Payton, USAF, North Highlands, Calif.

DUTCH CUPBOARD made from solid cherry features hammered copper hinges and knobs. Built by Gerald Warren, Hagerstown, Md., it stands 67 inches high, 34 inches wide.

TEPEE, constructed by 16-year-old Joel Hendricks, Mattoon, Ill., measures 14x14 feet. In true Indian fashion, he cut the saplings and stitched the canvas himself.

PLANE, a modified Interstate Cadet, was built for $600 by William McCracken, El Paso, Texas. Craft takes off in 600 feet and cruises at 105 mph with a 65 hp engine.

HOUSE was built in a little over a year by Joseph Castledine, Palmer, Mass., who worked side by side with his wife. This spring they'll start work on a back porch.

NINE-FOOT TRAILER weighs 925 lbs. It was built by J. Rademakers of Roosendaal, Netherlands. It sleeps four comfortably, has a small kitchen and is easily towed.

MI KETCH "TAHITI" is the 2½-year effort of C. R. Schram, Hagersville, Ont., Can., who constructed the hull of 3/16-inch steel plate—all of which was hand bent to fit!

Each craftsman whose project is shown receives a 24-karat gold-plated Hammer and a Workbench Award Certificate. Runners-up will be sent a beautiful gold-plated Golden Hammer Tie Bar or MI's Certificate of Merit. How about sending us a *black-and-white* photo and *full* description of your latest project? Photos of you and your workshop are also eligible. Send all entries, with return postage enclosed, to MECHANIX ILLUSTRATED Golden Hammer Awards, 67 West 44th St., New York 36, N. Y. Entrants are advised that MECHANIX ILLUSTRATED cannot accept responsibility for customs charges, duties, taxes, etc., levied against Golden Hammer and Golden Hammer Tie Bar winners outside the United States.

The following craftsmen have been awarded GOLDEN HAMMER TIE BARS for their projects: Arthur J. Bowman, Jr., Long Island, N. Y.; Milford Allen, Dixon, Ill.; W. Burke Wylie, Kensington, Md.; Don R. Youngblood, Kansas City, Mo.; S. T. Olsen, Muskegon, Mich.; Robert F. Ehrman, Dallas, Tex.; E. C. Sims, Laguna Beach, Calif.; David L. McCall, Palmetto, Fla.; Milton Beychok, Long Beach, Calif.; John T. Defino, Waltham, Mass.; W. H. Martin, Hammond, Ind.; John H. Schmitt, Syracuse, N. Y.; John A. Smith, Royersford, Pa.; Robert Koval, Horseheads, N. Y.; T/Sgt. James Baay, San Francisco, Calif.; John R. Harvath, Alexandria, Va.; Frank V. Scharfenberger, Jeffersonville, Ind.; J. L. Hammond, Pierre, S. D.; Clarence C. Holben, Lafayette, Calif.; Dennis Toscano, Medford, Mass.; Robert C. Wellington, Jr., Stratford, Conn.; Stanley Reetz, [Continued on page 160]

BLACK-TOP PATIO

By Ralph Treves

INSTANT-PAVE comes in specially lined bags, each weighing 100 pounds. A bag covers nine square feet to a one-inch depth.

A NEW type of asphalt now makes it possible for any home owner to lay down his own patio in two or three hours. While similar to the material used for paving, this asphalt is applied "cold" right on the ground. No excavations, footings or cement mixes are required. It can also be used to pave walks, driveways, garage floors, etc.

The asphalt comes in 100-pound sacks and is kept "workable" by a naptha-compound solvent which is retained by the sack's plastic liner. One sack covers nine square feet.

Dump the asphalt in a number of small piles around the patio area. Use a pitchfork to break up any clumps. [*Continued on page* 164]

Cold asphalt is a versatile, durable material now being used by do-it-yourselfers to build walks, driveways—and hep patios like this one.

COLD ASPHALT is raked to 1-in. thickness within the 1x3-in. frame which forms the perimeter of the leveled patio area.

AFTER RAKING use a lawn roller as shown to compact asphalt. Go over it in two directions; fill and cut lows and highs.

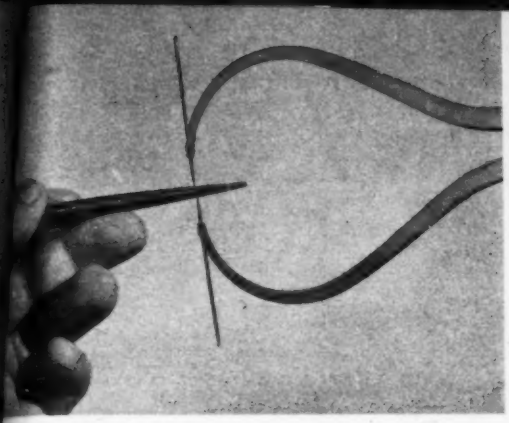
LAYKOLD BONDING PRIMER is applied to asphalt base with a mop. This serves to prime the surface for the colored top.

WALKTOP mix is laid on with a trowel. This is the colored finishing coat which hardens as well as beautifies the surface.

Shop Tips

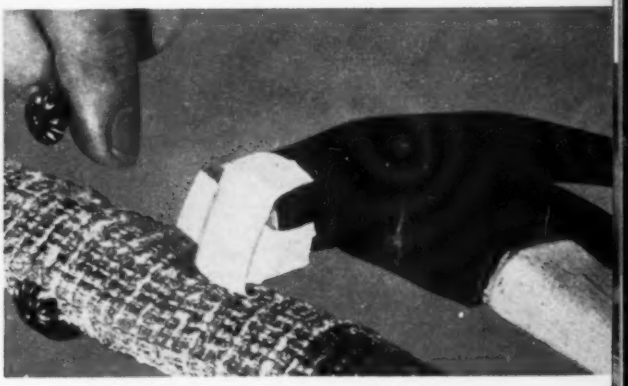
TO DRILL STRAIGHT holes through dowels, use following method: (1) Center hole of drill press table directly under drill. (2) Scribe center points on each end of stock. (3) Drill ¼-inch-deep hole into one end of stock. (4) Reverse stock so that hole rests on a ball bearing as shown. Use a piece of plywood with hole of correct size drilled in it if table hole is too large for ball. (5) Drill halfway through: reverse stock, finish drilling from other end.

FREDDIE FUMBLES



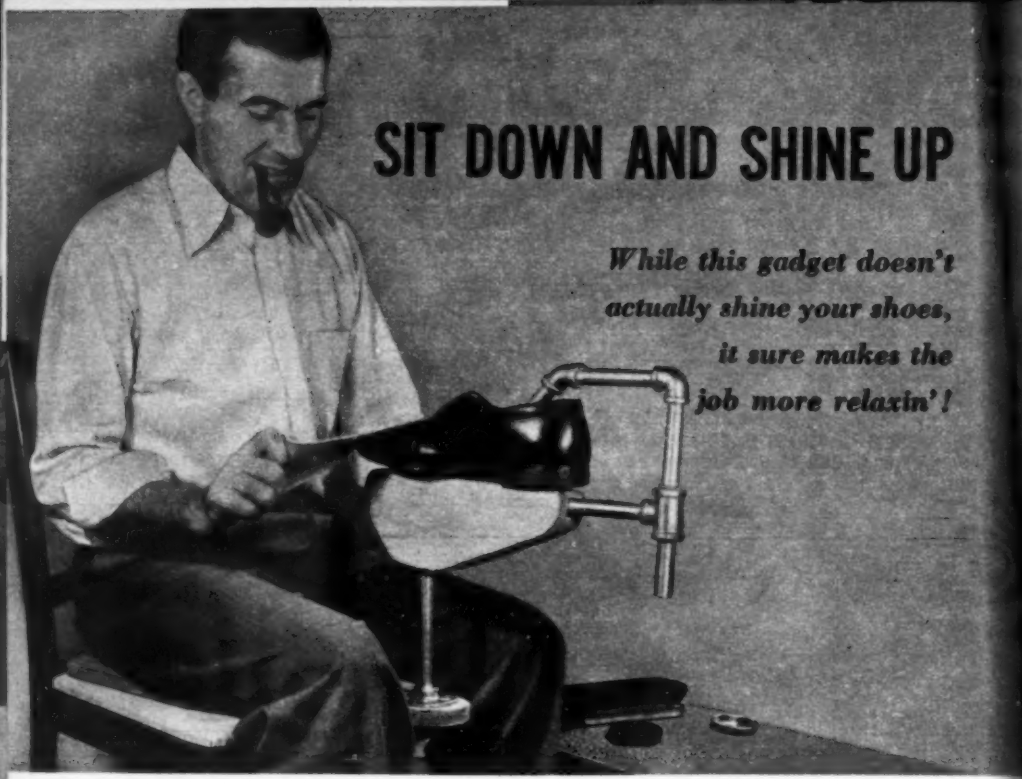
CALIPER MEASUREMENTS of thread diameters can be transferred to a micrometer by using the soldered-on needle points of the calipers to scribe a pre-inked wedge at the end of a screwdriver. A micrometer reading can then be picked up from the scribed mark.

SHALLOW PAN with one corner cut out makes a handy small-parts tray.



ADHESIVE taped to hammer head prevents marring decorative heads of furniture nails.

Send Freddie Fumbles your idea of a good short-cut, time-saver or safety device in your work, whether it be in the home, shop, office or farm. Each tip accepted will be paid for at the rate of $10. Naturally we cannot acknowledge or return the ones we cannot use. However all will be carefully read and evaluated. (Those which we can use in other departments of MI will be paid for at our regular rates.) Please send in your ideas on a post card only. Address to Freddie Fumbles, *Mechanix Illustrated*, 67 W. 44th St., New York 36, N. Y.



SIT DOWN AND SHINE UP

While this gadget doesn't actually shine your shoes, it sure makes the job more relaxin'!

THERE'S no need to stoop or squat and get a crick in your back in order to get a looking glass shine on your shoes. Here's a brand new way of shining your shoes that comes the closest to making it a pleasure instead of a chore.

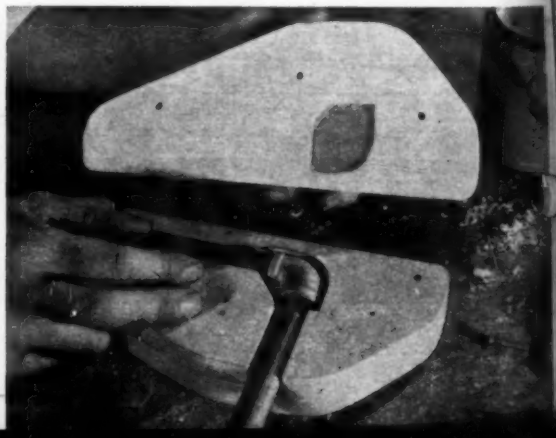
When this shoe holder is on a flat chair or stool your weight will keep it surprisingly steady. It is simple in design and easy to build. With the addition of a few varied shoe forms it will accommodate the shoes of the entire family.

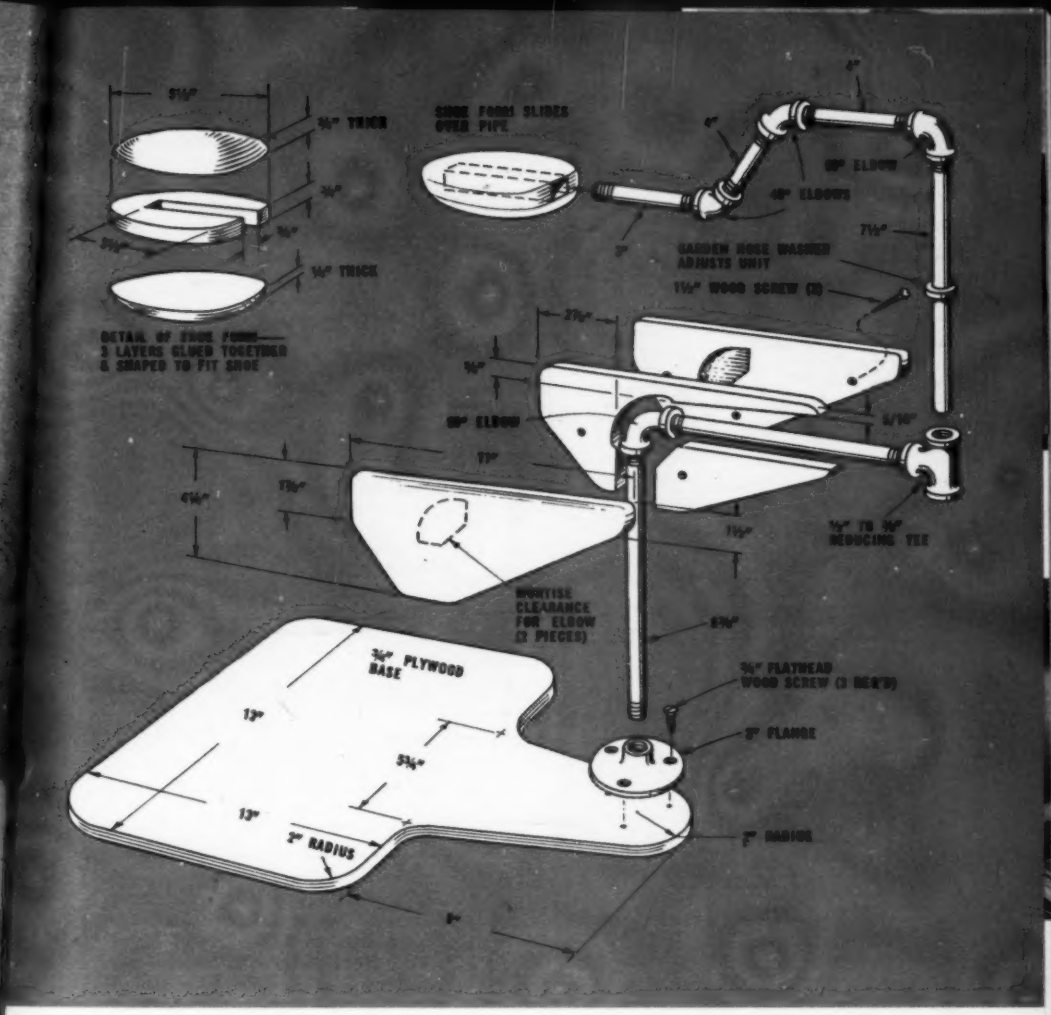
Galvanized pipe, ⅜-inch, and fittings are used as well as ½-inch pipe and reducing tees. Plywood forms the base and platform. The shoe forms are made of soft pine for easy shaping.

To use, place [*Continued on page* 162]

DRAW OUTLINE of seat on ¾-inch plywood, then cut out piece with a band saw.

PIPE fits into center part of platform. Mortise outside pieces before assembling.

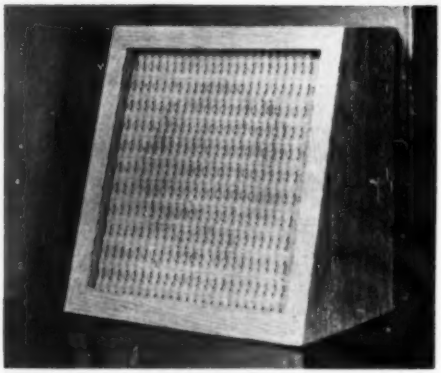




PLATFORM is assembled with 1½-inch flathead screws turned into countersunk holes.

SHOE FORM also consists of three pieces; cut to size; then glue together as shown.

FIX-IT-KIT provides the home craftsman with an adhesive to meet every need, is sold with chrome wire rack for $3.99.



SPEAKER connects to tape recorder, radio or record player, can be installed in any part of the house; $10.95, ppd.

Hank & Bert, Box 6336, Denver 10, Col.

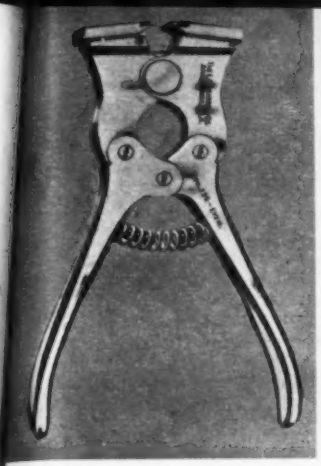
A powder to remove soot from furnaces is made by General Filters, Inc., of 43800 Grand River Ave., Novi, Mich. It works by enabling soot particles to combine with the free oxygen in the air.

SAWHORSE LEGS are aluminum, support over 1000 lbs., fold; they're 20" high, sell for $8.95 a pair without the wood.

Alum-A-Lok Products, 136-138 Church St., Groton, N. Y.

HAMMERS with metal body have threaded, replaceable plastic tips, are balanced for no shock or bounce on impact.

The Custanite Corp., 1228 Utica Ave., Brooklyn 3, N. Y.

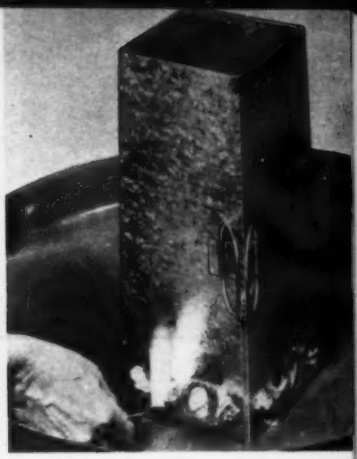


DETACHABLE carbide-tipped nipper jaws can be reground.

L. S. Starrett Co., Athol, Mass.

ONION BIN of unbreakable polyethylene costs 98 cents.

Fed. Tool Corp., 3600 W. Pratt Blvd., Chicago 45.

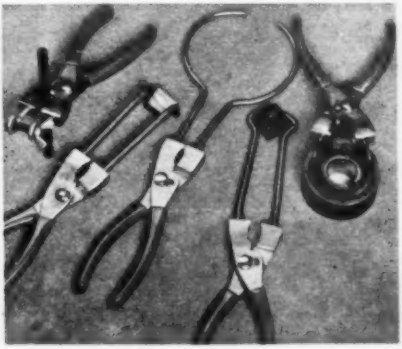


CHARCOAL ignites quickly in Char-Start holder; $2.98.

May Research, Inc., Box 98, Isle, Minn.

DIAL-A-DRILL produces any of 29 drills at twist of the top, is priced at $4.50, ppd.

Keystone Ferrule and Nut Co., Box 11, Burlington, Wis.



DIFFERENT TIPS for pliers above get into hard-to-reach spots, hold hot objects, etc.

Paton-Reynolds Co., 2150 N. Ritter Ave., Indianapolis 18

STOP GAUGE used on radial and bench saws assures accurate cutting of wooden stock.

L. Stahl, 3166 Wadsworth, Saginaw, Mich.

CLOTHESLINE case mounts on wall; plastic line reels out to a bracket opposite.

McClintock Mfg. Co., 802 West Whittier Blvd., Whittier, Calif.

MITRE TOOL is placed right on the job to be cut, can be used on any size lumber.

Chesney, Inc., Glendale, Calif.

RADIO AND HIGH FIDELITY

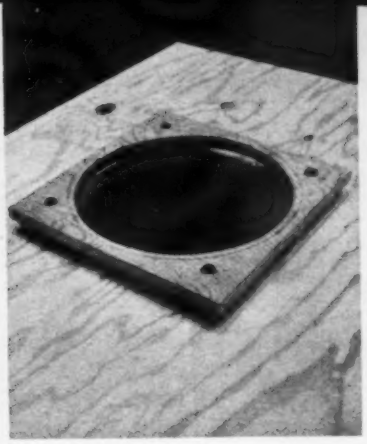
RESONATING DIAPHRAGM SPEAKER

Here's the recipe for twelve-inch sound from an eight-inch speaker: hand tools, plywood, muslin, dope, a stapler. Build well. Serves any number.

By Tom Stevenson

THIS is one of the simplest, most effective hi-fi enclosures ever devised for the popular eight-inch speaker. Acting as an extension of the speaker cone, this resonating diaphragm will produce a clean, deep-chested bass and crisp clear highs with all the quality of a 12-inch speaker.

The enclosure is basically a box with a resonator platform and a muslin dia-



LEFT. Fold muslin in quarters, pencil creases, then trace ¼-circle pattern in corner. CENTER. Resonator platform is spaced and bolted over cutout of the enclosure's back. RIGHT. Muslin is stapled from the rear to the inner lip of the hole in the resonator.

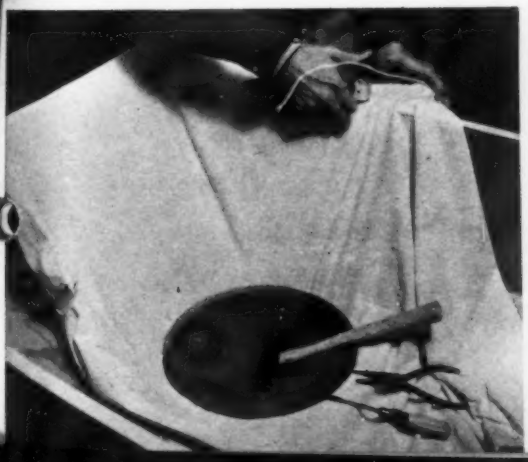
phragm. You can make it easily with hand tools. It can be integrated with your present hi-fi cabinet behind the usual grille cloth or it can stand alone as a smart looking piece of modern furniture finished to match the rest of your furnishings. It can be made of hardwood veneer, plywood, or even inexpensive common pine.

Start with the back which is cut from ¾x18½x28½-inch plywood. Cut the ¾x9x9-inch plywood resonator and center it on what will be the *inside* of the back panel. Fasten it in place temporarily with one-inch box nails at the corners. Determine the exact center of the resonator and drive a one-inch nail through to mark the centers of both the resonator and the back panel. With the resonator still in place, drill the four ¼-inch bolt holes through the resonator and back panel and one inch from each corner.

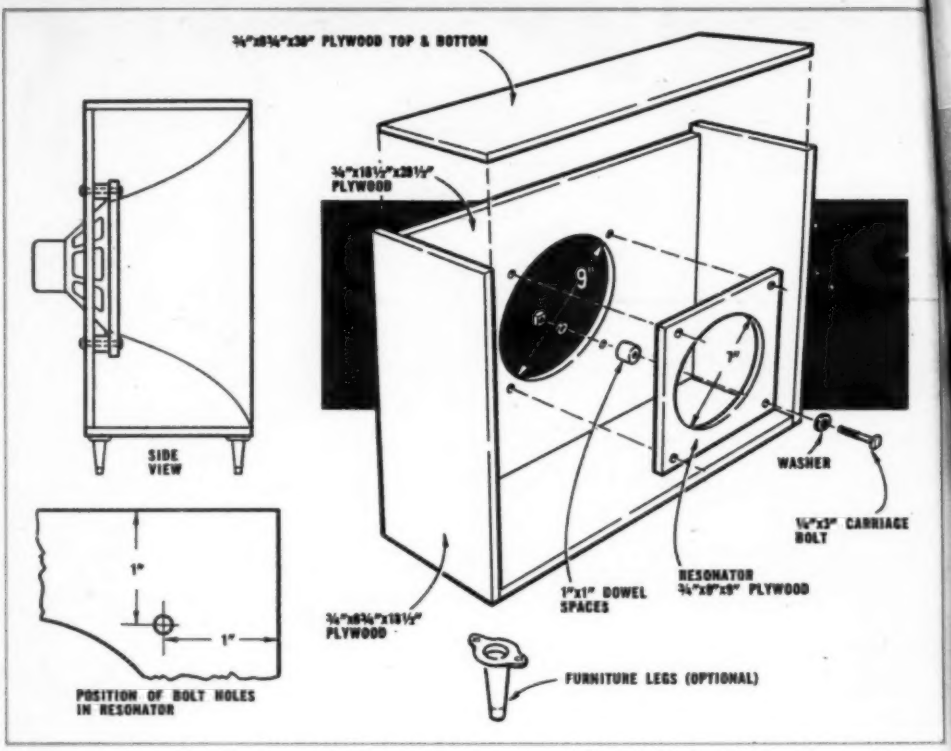
Cut the port in the back panel nine inches in diameter plus whatever extra grooves might be necessary to allow the passage of projecting lugs. The port in the resonator is exactly seven inches in diameter. Sand the resonator port edge and fill with plastic wood. Finish it with fine sandpaper, rounding the front edge slightly so that the wood won't cut into the muslin.

Now here is where accuracy is important: The spacers that hold the resonator forward from the back panel

TEMPORARY STAPLING to front edge of enclosure begins to draw muslin to shape.



AFTER DOPING, excess muslin is trimmed off close to the edge with a razor blade.



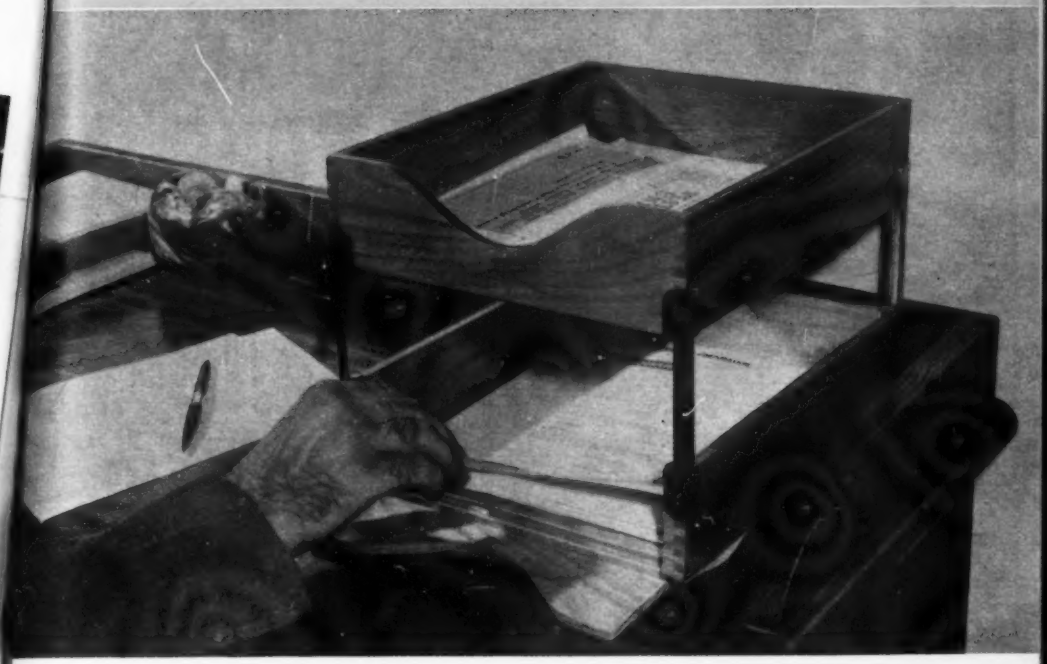
must be made from 1x1-inch hardwood or one-inch dowel rod cut absolutely square and accurately center-drilled for the ¼-inch bolts, preferably on a lathe or drill press. Apply some quick-drying glue to the ends of the spacers. Install the spacers along with the resonator with bolts and washers as shown.

Cut the 8¾x30-inch side panels and the 8¾x18½-inch top and bottom pieces from ¾-inch wood of your choice. Assemble the enclosure with glue and two-inch finishing nails. Then fill and sand the [*Continued on page* 169]

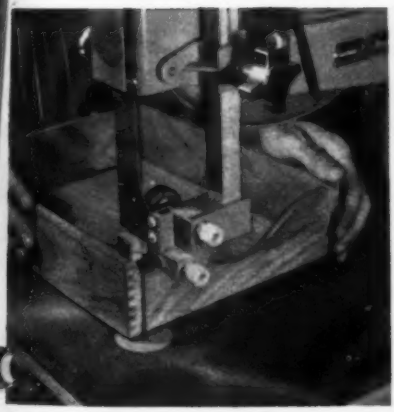
SPEAKER slips through port in back panel and is secured to rear of resonator platform.

AERO DOPE is rubbed into muslin with a stiff brush: seven coats—no more, no less.

EASY-OPEN DESK TRAY



NO more snagged hangnails reaching for papers in this cleverly designed desk tray. The front of the bottom tray is hinged; weight of tray causes it to snap shut when it is released.—*R.B.*



TWO vertical cuts are made with a hand saw or with a back saw.

APPLY a heavy tape to the inside edge while holding flap open.

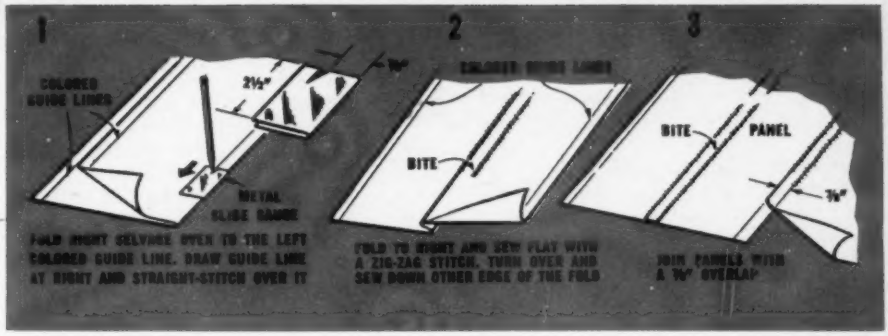
NEXT another strip of tape to outside bottom.

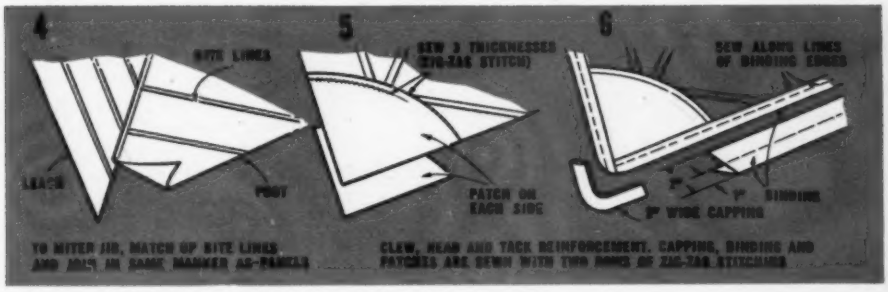
MAKE YOUR OWN SAILS

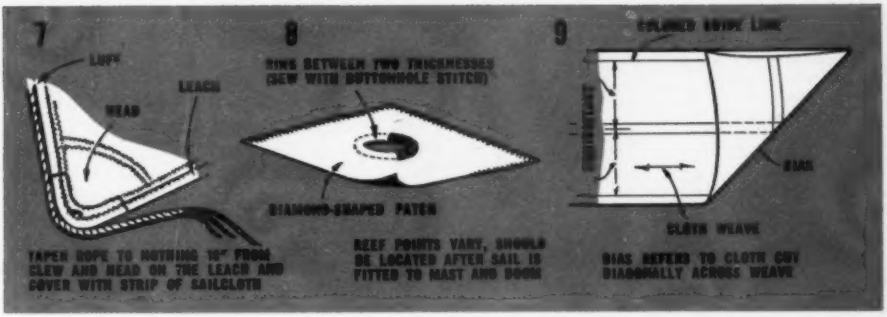
By Myrtle E. Klein

YOU don't have to be a professional to make a good suit of working sails for your boat—I'm just the sailing wife of an average sailing fan and I've done it many a time. All it takes is time, patience and the ability to sew an even zig-zag

MRS. KLEIN, left, sews on portable machine in upstairs bedroom. Husband, Anton, made their boat and she made the sails he's raising, above, for $56.50!



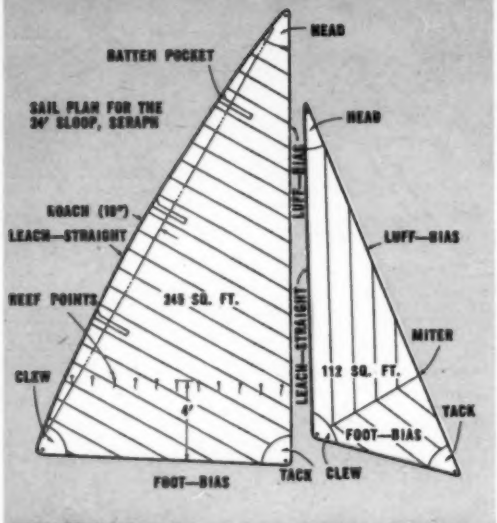


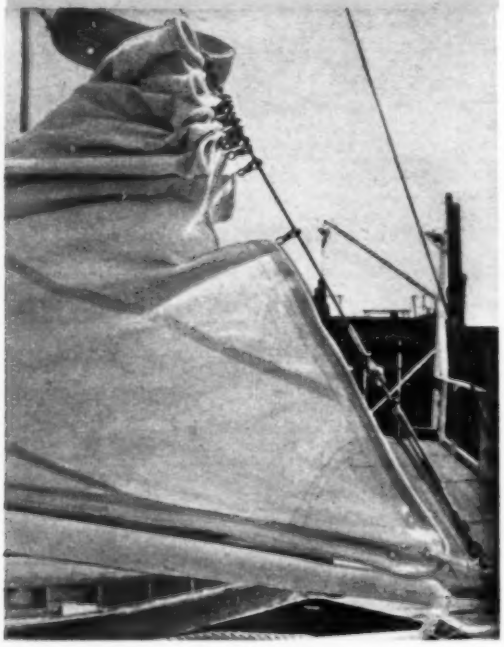


stitch. And when you do the labor, you save three-quarters or more of the ready-made cost.

If you're ready to tackle the job, first determine how heavy your material should be, how much you will need, what size thread your sewing machine will take and what size rope you will use. Study your old sails, examine those on other boats and talk to a sailmaker if possible. When you buy the cloth, make sure that it has a colored margin for the bite. Cloth without this line definitely is not for amateurs.

After selecting your cloth, make a slide gauge from soft metal. This is illustrated in drawing 1. The width is determined by the colored guide line on your material. In making the sails for our 24-foot sloop, *Seraph*, my bite was ⅞-inch on lightweight, 30-inch cotton drill. Yours may be wider or narrower.





TACK of jib is shown above. Note how rope sits on sail's edge with snaps and slides whipped on.

The steps in preparing a panel are shown in drawings 1 and 2. After folding the right selvage over the left colored guide line, iron a crease all the way down the fold. Then draw the line with the slide gauge and straight-stitch over it. Next adjust your machine for a medium zig-zag stitch (mine was set at 3 and 3) and sew the two rows down the double fold as indicated. Be sure that these rows are equally distant from the colored guide lines or your bite lines will not be parallel and the job will be a failure from the start.

For measuring and cutting the panels to the sail's specifications, a gymnasium floor would be ideal. However, I use the back yard. If your lawn is level, dry and mowed short, it will work out fine. Going by your sail's specifications, add three inches all around for a margin and drive stakes into the ground at the apexes of the triangle. Then tie string taut between the stakes and bend a batten along the line of the leach for the specified roach of your mainsail.

When laying out the panels, keep this in mind at all times: *the foot and luff of the sail must be on the bias of the material and the leach must be on the straight.* When you hear of "badly cut" sails it's because this wasn't observed. See drawing 9.

Number and pin the panels together with safety pins as you lay them out in the triangular form of the sail. When they are trimmed to size, you can pick them up for sewing. Each panel is joined to the other as shown in drawing 3. Remove the safety pins only after you get a good grip on two adjoining panels and are about to clamp the machine's shoe down for zig-zag stitching. Join the panels from one end to the middle of the triangle and then from the other end to the middle. In this way, you'll have only half the sail going through the machine arm at once, making your job easier. It's best to do the jib first, mitering it as shown in drawing 4. Then do the bigger mainsail.

When the panels are sewn together, [*Continued on page* 162]

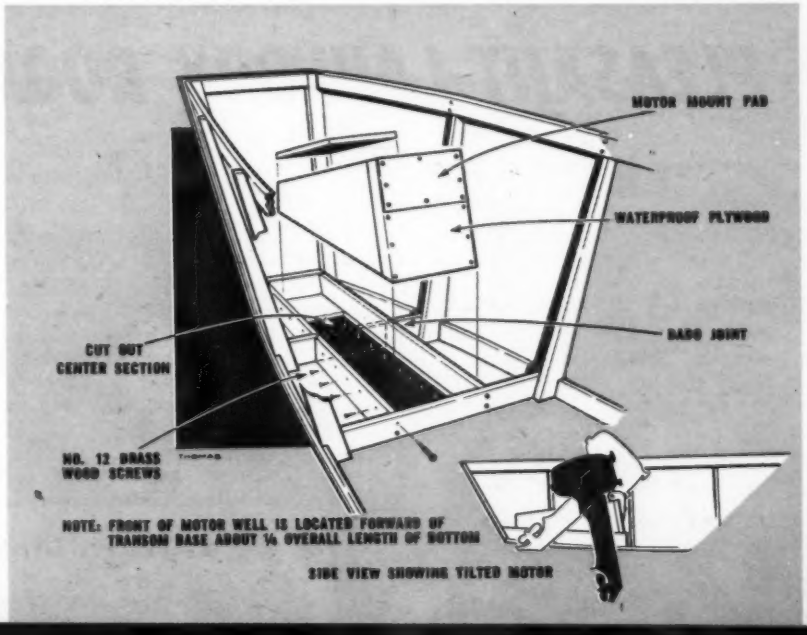
POWER FOR THE DORY

THE seaworthy dory is a popular boat with economy-minded offshore fishermen, but many who use it turn to outboard power in an inboard well rather than bend their backs to oars.

Wells are divided into two broad classes: the square, vertical type for deep waters and those with an opening big enough for the motor to tip up in shallow water. In the former, most owners keep water from sloshing up by cutting inner tube to fit snug around the shaft below the motor head and tacking it to the well sides with lath. With the tilt-up well, owners swear that the wash against the slanting top (drawing below) actually helps to lift the narrow stern of the dory. In no case is high power used because this sucks down the stern, making riding sloppy and reducing speed. A 3-hp motor seems to be most common.—*Jim Neilson*

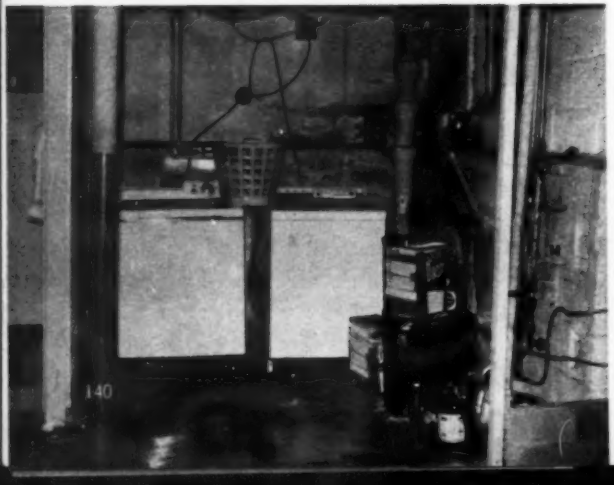
THIS WELL permits motor to be tilted.

A SQUARE WELL for deep water operation.



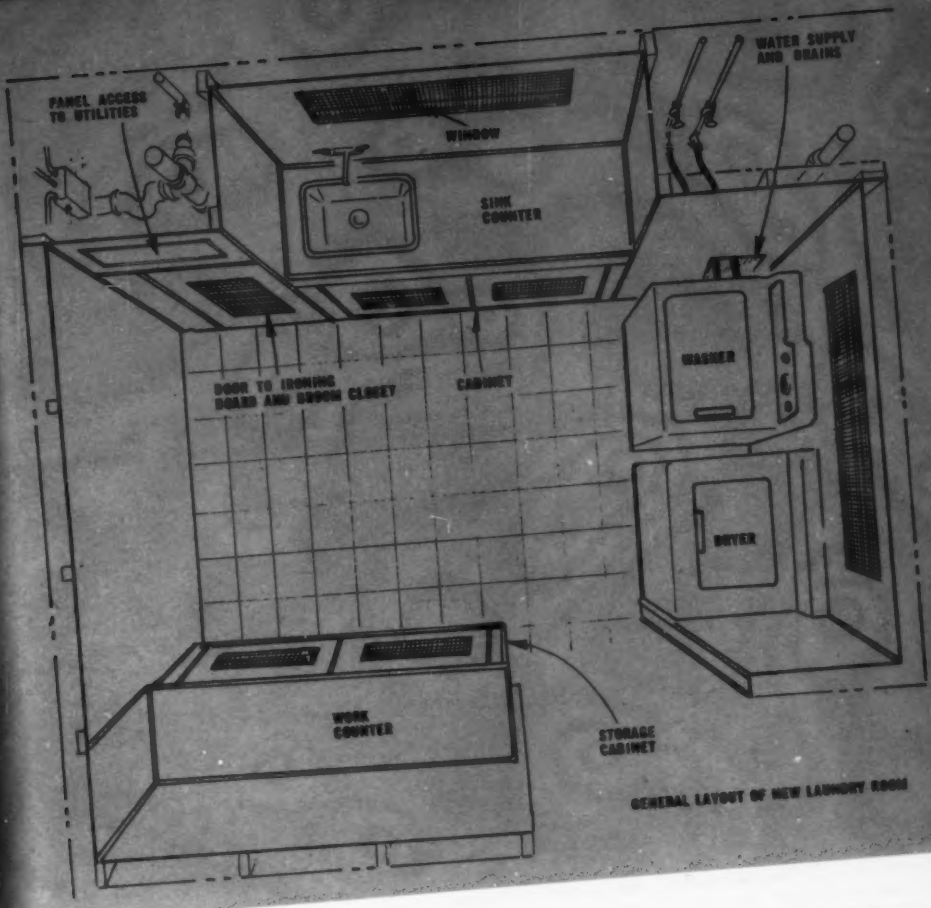
A PLEASANT LAUNDRY ROOM

By R. J. Capotosto



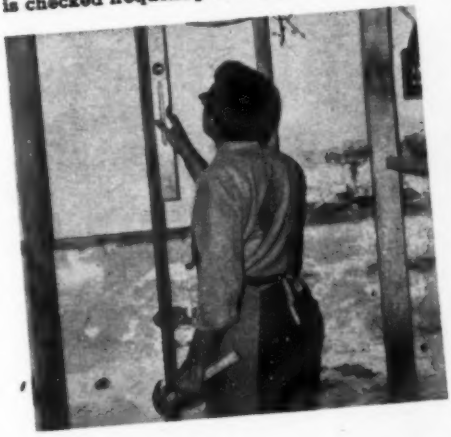
IF your spouse now looks with dread upon the chore of laundering, perhaps the cause of her attitude can be traced to the dank and dingy laundry room that awaits her each Monday. Yet there's no good reason why the base-

"THEN" AND "NOW" views show transformed laundry area.



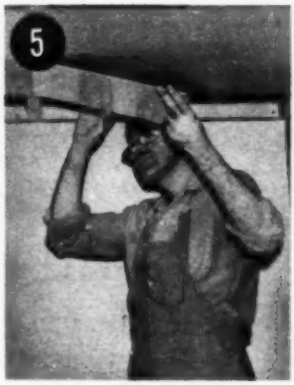
GENERAL LAYOUT OF NEW LAUNDRY ROOM

FRAMING WORK will be kept true if it is checked frequently with plumb and level.



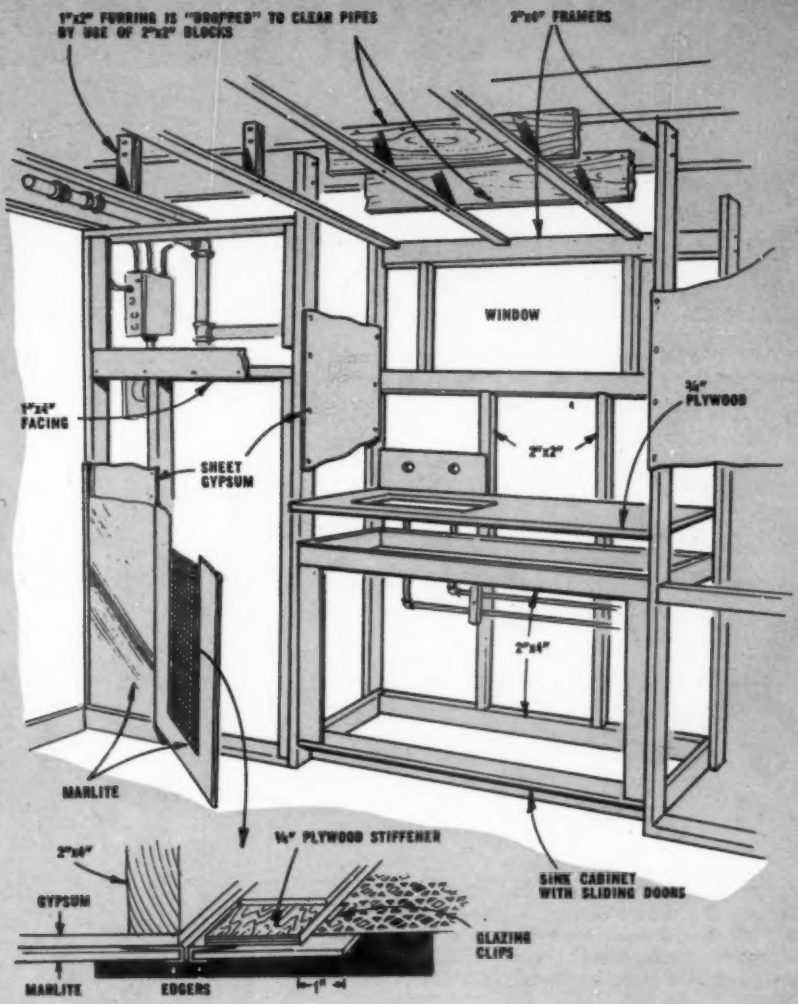
LIGHT FIXTURE is recessed and wired before it is closed in with plasterboard.

1. **SINK TABLE** is framed with 2x4's. 2. Plasterboard is nailed to ceiling as C-clamp (background) holds piece in place. 3. Serrated spreader applies adhesive to panel back.



4. **METAL CLIPS** fitted between panels provide 1/16-in. "expansion space." 5. Milled tongue-and-groove panels slip in place easily. 6. Jig saw is used to speed fitting of panels.

7. **PANELS** should always be cut face-up. 8. Serrated spreader applies adhesive evenly. 9. Panels "sprung" into place between fixed moldings are then hand-pressed to the wall.

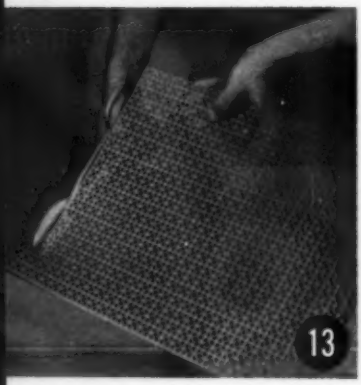


ment laundry area should play the poor relation in an otherwise well-appointed home. Modernizing and redecorating this space can be accomplished in a few well-spent weekends.

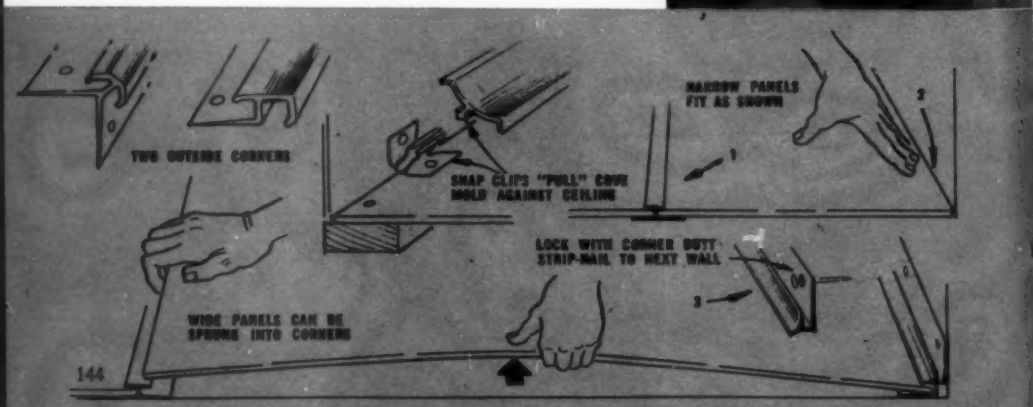
A tough covering called Marlite was used to finish the laundry room pictured here. Its plastic finish is immune to dirt, grease and moisture and resists heat and

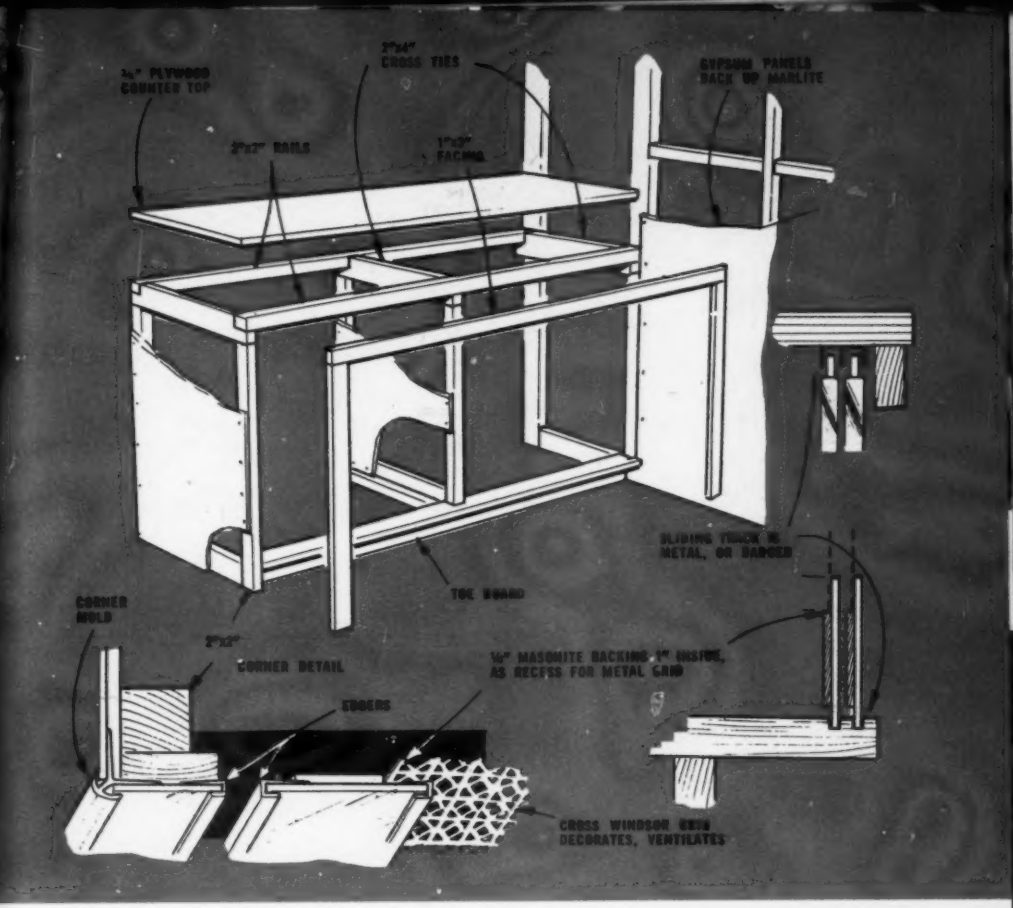
PANEL, with bottom molding attached, is set in place behind fixed corner molding.

10. SCRAP PAPER serves as template for sink top panel. **11.** Waterproof joints around sink with caulking compound. **12.** Press cove molding in place over clips nailed in wall.



13. METAL GRIDS are cut to size using a pair of tin shears. **14.** Contact cement is used to bind the panels to frame of the closet door. **15.** The closet, which houses ironing board, mops, brooms, etc., is so situated that it also encloses plumbing fixtures.





staining. Installation consists of three basic steps: wall preparation; cutting and fitting; application of adhesives.

By careful planning, relatively close quarters can be made to accommodate a washer, dryer and roomy cabinets under the sink and work counter. Water pipes, as well as junction and fuse box, are readily accessible for servicing. A removable ceiling section provides access to water valves and U-trap.

Unless your existing wall is straight and sound, a 2x4 framing should be installed from floor to ceiling. The plasterboard—which serves as a base for the panels—is then nailed to this.

You may find it necessary to lower the ceiling in order to conceal overhead pipes. Start the Marlite panels in a corner of the ceiling. Comb on a thin layer of ad- [*Continued on page* 164]

LAYING ASPHALT TILE on laundry-room floor is final step of the conversion job.

HAS YOUR CAR GOT THE SHAKES?

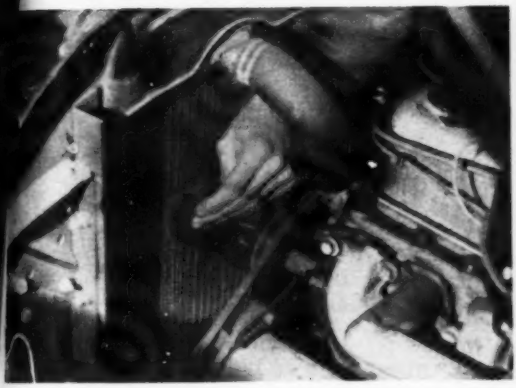
By Frederick C. Russell
Member, Society of Automotive Engineers

VIBRATION is a real problem for millions of motorists, causing serious troubles and actual breakdowns—and the fly in the ointment is that it isn't easy to cure. Some car vibration simply has to be tolerated but you'll be able to save yourself many a buck if you know how to keep it within bounds.

I recently saw a car with a defunct automatic transmission. The unit had

LOOSE engine mounts cause shakes; also chatter when shifting if car has a clutch.

TROUBLES arise if vibration damper at front of engine shaft isn't functioning.



FAN which is out of balance will create a good deal of vibration at high speeds.

HIGH SPOT on tire tread is common cause of car vibration; it should be buffed off.

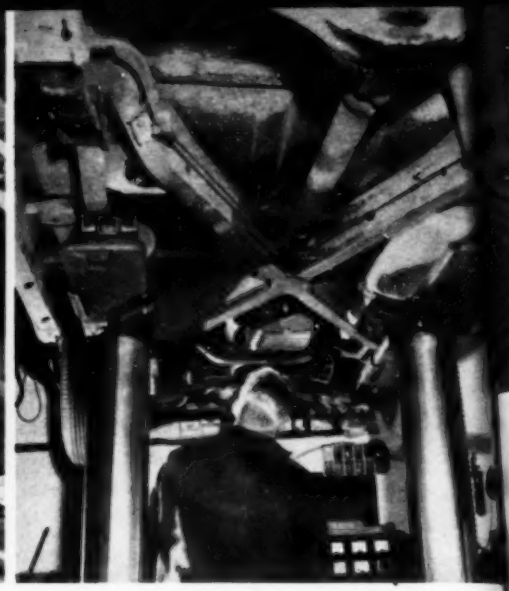
lost oil and in its place was a considerable amount of water. Checking revealed that the transmission oil cooler, built into the bottom of the radiator, had developed a bad leak. Oil escaped into the cooling system and water leaked into the transmission. The shop reported three other such cases within the week. "Vibration," the foreman explained simply.

Luckily, the steps to take in helping to prevent this sort of trouble apply to the business of licking the consequences of vibration in general. Rule one is to avoid holding the car at any particular speed at which there is trembling.

Rule two is to step up inspection. Had the owners of the cars with the transmission trouble made it a habit to take a look into the radiator every few days, they would have seen signs of oil in the water and would have forestalled the transmission breakdown.

Rule three calls for knowing something about the particular design of your car. It may have unusual features which bear watching and call for specific service. Typical is the split pro-

CHECK ignition timing; excessively advanced spark can cause damaging stresses.



SOME CARS have a split propeller shaft; if the carrier bolt is loose, chatter occurs.

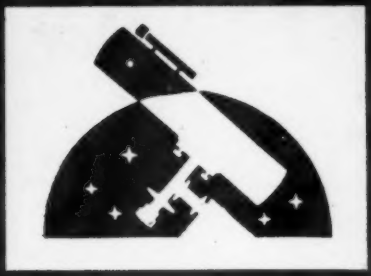
peller shaft on some late model cars. The two shafts have a carrier support about half way between the transmission and the rear end. If one of the bolts holding this carrier loosens, the shafts will set up a chatter which the car frame will amplify. The same happens if the rubber mounting for the carrier becomes damaged from excessive road splash or oil. Sometimes both ills develop, compounding the vibration.

With these rules clearly in mind you are well prepared to cope with the problem of vibration. Take rule one again, just to show how it works on an old problem and then a new one. Let's say the car has conventional drive and the whole job seems to chatter badly especially when backing up and also when going forward. Here the trouble is due to the engine idling too slowly. The driver fails to accelerate the engine as he comes up with the clutch pedal. There's almost a stall and, as he suddenly remembers to feed more gas, the engine labors, the clutch slips and the driveline chatters. He is told not to "baby" the clutch, but to feed more gas and then let the clutch pedal come up faster. In other words, he merely switches to a different engine speed, keeping away from that too slow idling which encouraged the fireworks in the first place. Now let's translate this to a more modern problem—one involving the "shift points" of a fully automatic transmission.

One driver notices that much too often there is a pronounced "bang" or heavy "klunk" at the rear end when he starts off at about 10 mph. He tries to check this by feeding gas very gently, but only makes it worse. A mechanic then tries but can't raise a sound, the transmission going through the shift points smoothly. The difference lies in the car's rate of acceleration. If acceleration is progressive, instead of halting, the transmission shifts "up" smoothly. The driver can lick his problem by changing the rate of speed increase.

I believe we can also check vibration at the brakes by changing the rate of speed decrease. If your brakes tend to squeal and you have made sure the brake shoes are properly adjusted, try increasing pressure on the brake pedal when you start to stop and ease off toward the end instead of starting with a light pedal pressure and building it up toward the actual halt.

A growing problem is the damage done to the [*Continued on page* 158]



The Amateur Telescope Maker's Page

By Robert Brichtman

More Gleanings

THE simplest possible finder is some sort of a peep sight and a cross hair, somewhat like a sight on a rifle. If something more elaborate is desired, a magnifying finder is the next choice. Such a finder should be of low power in order to show a wide field. Power in any case should not exceed eight times. If at all possible, the image should be erect in order to locate the object chosen for viewing as quickly as possible.

* * *

Lunar Activities. A Soviet astronomer, Dr. N. A. Kozyrev, has reported that he has seen volcanic activity on the surface of the moon on the morning of November 4, 1958. While making an observation with a guiding telescope he noticed that a peak on the moon suddenly became dull red and appeared to become enveloped in a reddish cloud of dust. Spectrograms taken at the same time through the main telescope showed emission bands of carbon!

* * *

Zonal Testing. **You are floundering if you don't keep a record of just what you are seeing under the knife edge. The shape you see should be sketched, then when you try a correcting stroke *its* shape should also be sketched. Only in this way will you know that you are on the road to that Mecca of Meccas—parabolization.**

* * *

Foucault. This year is the 100th anniversary of the Foucault knife-edge test. And speaking of knife-edge tests, this test can be performed on a star instead of a lamp. The star in this case is at infinity while the lamp when used with the conventional knife-edge test is placed at twice the focal length of the mirror. To conduct a star knife-edge test, remove the eyepiece and substitute the knife. The mirror will show the same shadows as when tested in the conventional manner. Due to the movement of the star across the field of view, the telescope should be driven by some sort of a clockwork mechanism to keep it in the field of view.

* * *

Observatories. **Has anybody built a good (inexpensive too!) observatory? One of our correspondents, Mr. Hal Metzger, has asked us to send out a clarion call for such shelters. If you have built a good one, or know of someone who has, please send us a snapshot. We will send out one of our top reporters to get the scoop.**

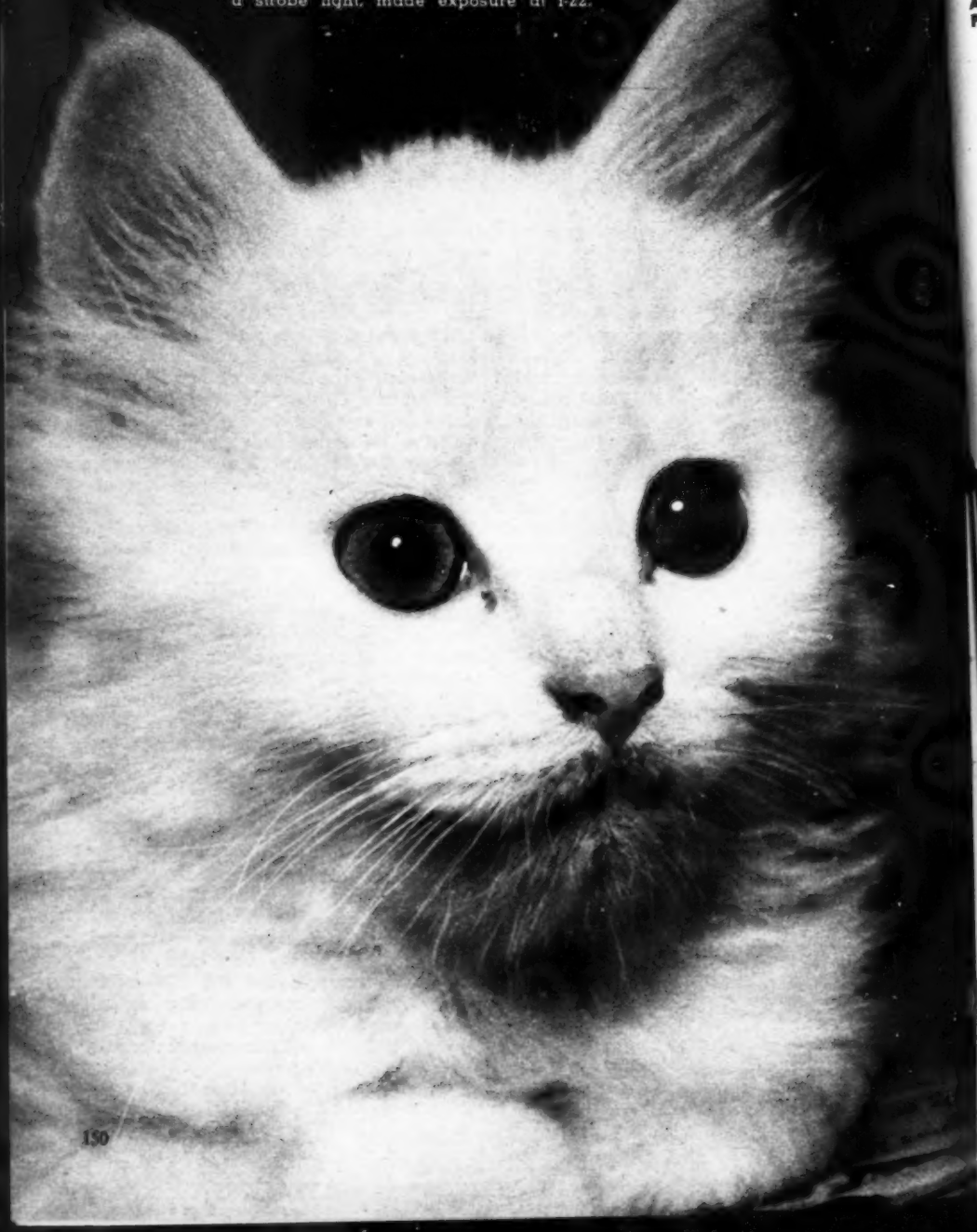
* * *

Moon Photos. To take them, set your camera at infinity and attach it firmly to the eyepiece of your telescope. An exposure of a half-second, lens wide open and high-speed film, will get you a good image of the moon. A longer exposure will blur the photo as the moon will have moved across the field of view. Make sure your 'scope is on a sturdy tripod and the camera eyepiece is rigidly locked. Next step, enlarge it to an 8x10 glossy photo.

[*Continued on page* 190]

MONTHLY PHOTO CONTEST

1st Prize ($25) ..... DARK EYES
Sal Celeski, Boise, Idaho, loaded his Yashica with Verichrome Pan and, using a strobe light, made exposure at f-22.



Please put your name, address and picture-taking data on back of each print. Wrap with cardboard stiffeners and enclose a self-addressed stamped envelope or postage for return of unused photos. Prize-winning pictures are not returned. Judges are MI Editors. Duplicate prizes awarded in case of tie. Address entries to: *Mechanix Illustrated*, Photo Contest, 67 W. 44th St., N.Y.C. 36.

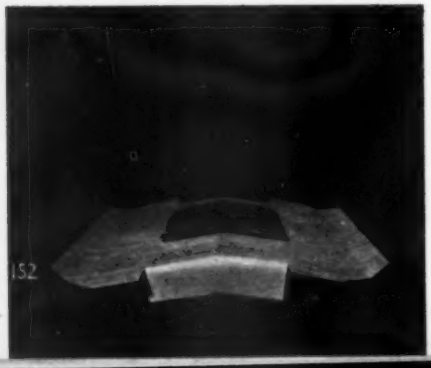
$10 Award .....DEVIL'S SINKHOLE
From within the largest sinkhole in the country, Bill Helmer of Austin, Texas, exposed the Tri-X film in his Kodak Tourist camera for 15 seconds.

$10 Award .....GAIL
Phil Blanchard, Amesbury, Mass., had Agfa film in Minolta; f-5.6 at 1/50th.

$10 Award .....STATION MASTER
Ikoflex and Panatomic X film were used by Bill Willis, Petaluma, Calif. Setting: f-22 at 1/5th.

Darkroom Dryer

SHEET METAL "angle irons" connect sides and bottom. Clamps hold rig for drilling.



UPSIDE-DOWN shot of primary and heat deflectors shows elementary pattern used.

Buying a dryer can be an expensive proposition. It's money in the bank when you can build your own for the amazingly low price of $10.

THIS darkroom dryer is efficient, inexpensive and easy to build.

Cost of the dryer should run less than $10 (the author made three for a total cost of $21). One dryer accommodates four 12x17-inch ferrotype plates. Using a 1000-watt cone heating element—and after a twenty-minute preheating time—the unit will dry about 28 single-weight, glossy 8x10 prints in one hour.

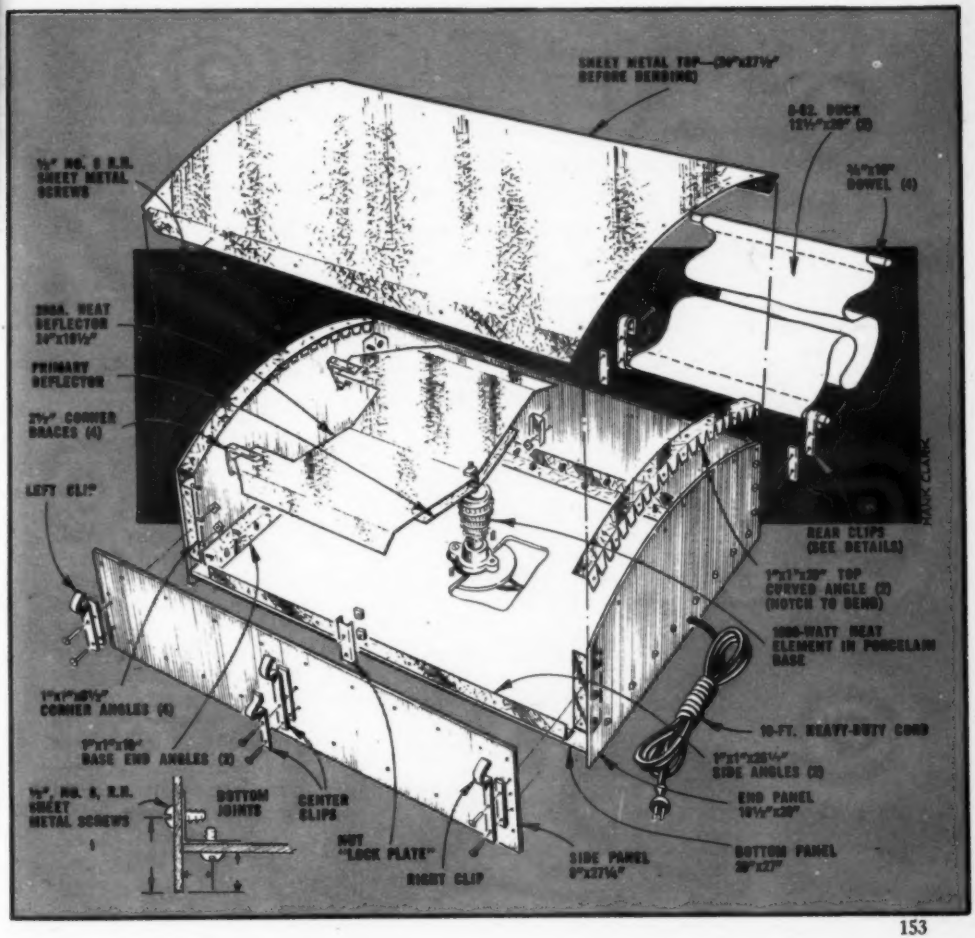
The basic materials you will need are ⅛-inch-thick asbestos board and a sheet of No. 26-gauge galvanized iron. When building more than one unit it is cheaper to buy the full sheet (4x8 feet) of asbestos board. Properly marked out, this panel will provide enough ma-

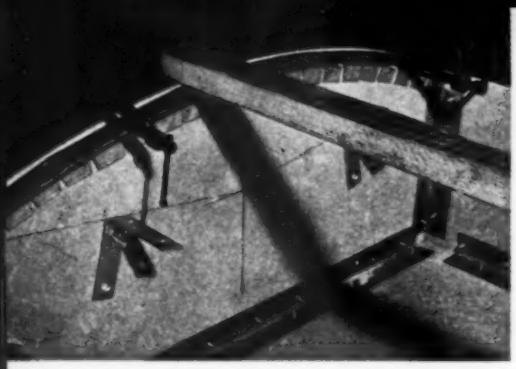
terial for three dryers. Sheet metal comes in 96-inch lengths and either 24- or 30-inch widths. Get the wider sheet if two dryers are contemplated.

The floor of the unit is a 20x27-inch piece of asbestos board; two 8x27¼-inch pieces make up the side panels (the extra quarter-inch is for the overlap at the ends). The ends are fashioned from 10½x20-inch asbestos board. This allows for the 2½-inch crown at the center of the pieces.

The screw holes in the side and end panels are predrilled at three-inch intervals in a straight line about 1¼ inches from the lower edge. A 9/64-inch drill makes a snug job for a No. 6 sheet metal screw. The corners of the panels and the bottom are similarly

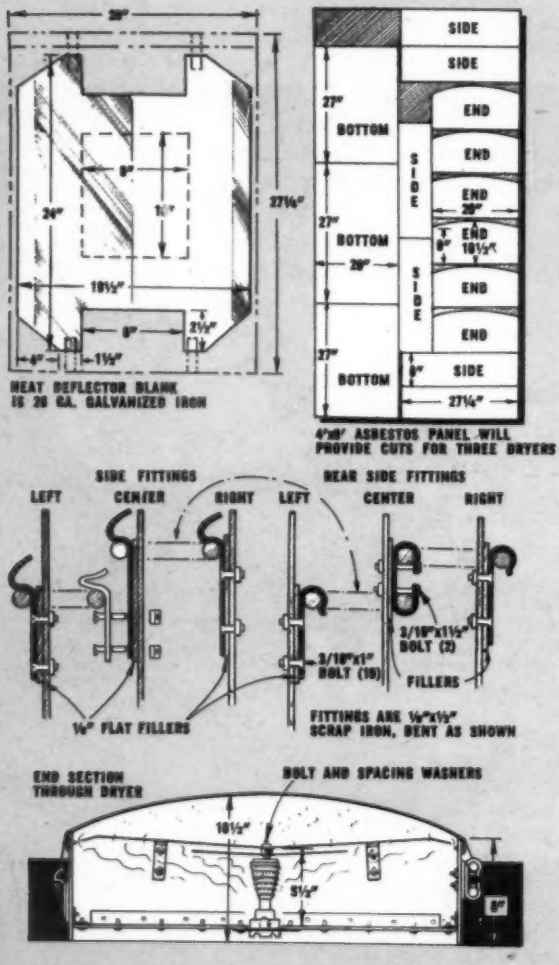
TWO-INCH SHEET METAL strips are bent to form bottom and corner angle braces.





"L" BRACES support deflector. Notch top "angle iron" to curve. Remove wood brace.

1000-WATT heating element is attached from underneath. Next, install deflector.



drilled a half-inch from the edges. The remaining holes are drilled later.

Three pieces of sheet metal should now be cut: 24x27½ inches for the top and 19½x24 inches for the heat deflector. An 8x10-inch piece is used for the primary heat deflector.

The base angles are fashioned from two-inch strips of the same sheet metal. This is done by fastening the strips to the edge of a table or a plank and bending down to a right angle.

The following lengths are required: four 6½-inch strips for corner braces; two 18-inch strips for ends, two 26½-inch strips for sides, and two 20-inch strips to be curved for attaching at the unit's upper ends. The latter two pieces are curved by making V cuts along one edge.

The bottom angle strips attach to the end and side panels three-quarters of an inch up from the lower edge.

[*Continued on page* 170]

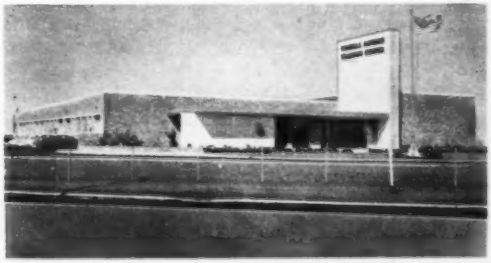
HOW AMERICA'S NUMBER ONE CARBURETOR TRAINS AN ARMY OF SERVICE EXPERTS!

Wherever you go, you'll find Rochester-GM Carburetor specialists who can accurately diagnose trouble to save you time and money.

Each month a trained army of Rochester-GM Carburetor specialists graduate from General Motors Training Centers and Rochester-GM Carburetor Field Schools all over the country. This training in carburetor repair and adjustment makes them qualified to maintain Rochester-GM Carburetors at peak efficiency. There's a Rochester-GM specialist in your neighborhood. Look him up for new-car performance. Or, if you are a mechanic interested in receiving Rochester-GM Carburetor training in your area *free of charge*, write to : Rochester Products Division of General Motors, Rochester, New York.

Qualified instructors with vast automotive experience train mechanics in every phase of carburetion, in the fastest, surest way to service Rochester-GM Carburetors.

Up-to-the-minute bulletins keep these specialists fully qualified at all times to assure the most efficient operation of your Rochester-GM Carburetor.



General Motors Training Centers offer mechanics professional methods of maintaining carburetors at peak efficiency. Night Field Schools are arranged for those unable to attend day classes.

GM
GENERAL MOTORS

America's number one original equipment carburetors

ROCHESTER CARBURETORS

Midget Sports Car

[*Continued from page* 121]

dropping too far away from the frame when the car is lifted off the ground.

The car's axles are made from square steel tubing that provides a flat surface on which the springs ride.

The front spindles are machined from stock of the same diameter as the wheel bearings. Wheel bearings, ⅝ inches I.D., were used on this model, so the spindles were turned from ⅝-inch stock.

The kingpins are standard three-inch, half-inch-diameter shoulder bolts. The tie rod and drag links ends are of heavy-duty carburetor linkage ball joints. The steering knuckles are bent up from flat stock, and the spindles welded on as shown in the diagram.

Drive system. A single-cylinder, two-hp, Continental lawn-mower engine powers the car and, with its gas tank relocated as shown, will fit in a minimum of space. While a new engine will cost between $40 and $50, a good second-hand unit will serve just as well and can be bought for *much* less.

The clutch used in this car is the V-Plex. This is a simple, foolproof type that is completely automatic and gives trouble-free service.

Installing the countershaft is the next step. Our counter-shaft, designed to give an over-all reduction of approximately 9.5:1 from engine to wheels, will be sufficient to drive the car at a top speed of over 20 mph—fast enough for the five- to ten-year-old who drives it. If desired, other ratios can be installed by simply varying the size of the large axle sprocket.

Although this car uses a roller chain from the countershaft to the axle, a V-belt with pulleys will prove satisfactory where severe usage is not anticipated. The small sprocket and steel pulley on the countershaft must be welded together, but don't apply the weld near the oilite bushings as this will cause them to lose their impregnation of oil.

The drive chain runs from the small countershaft sprocket to the large axle sprocket. This latter sprocket, when properly tightened on the axle, requires no key; it is held on the shaft by compression. The chain is adjusted by moving the countershaft fore and aft in the slotted chassis holes; the belt is adjusted by moving the engine on its slotted holes. The axle is supported on the chassis by two self-aligning ball-bearing pillow blocks which prevent binding of the axle when the chassis is in motion. The pillow blocks, mounted on spacers of one-inch oak, serve to elevate the rear axle and keep the chassis in a level position.

The axle is machined from one-inch stock to insure rigidity. One end has a milled keyway for the drive wheel; the other end is turned to the diameter of the wheels' ball bearings. The one-wheel drive eliminates the need for a differential.

The brake is attached directly to the axle and acts upon the drive wheel. It utilizes a V-belt and pulley arrangement that is both simple and effective. The actuating lever is mounted to the floor of the car and looks like a gear shift lever.

You should be able to complete this car in about six weeks of spare-time work. We guarantee you'll consider your labors well spent when you roll this baby off the "assembly line" and present it to your breathless offspring—the luckiest kid in the block. •

BILL OF MATERIALS

Body & grill	Amroc Engineering Co., Valley Stream, L. I., N. Y.
Engine	Continental AU7 or AU8
Steering wheel	Amroc
Wheels	Standard midget racer type
Upholstery	
Angle iron	round and flat stock
Steel tubing	
Large sprocket	48-tooth, #35 chain, 1" bore, malleable iron bushing
Small sprocket	12-tooth, #35 chain, ½" bore steel
Pulley	6" diam., B-width steel with ½" bore
Belt	24" B-width
V-Plex clutch	2½" diam., for B-width belt
Countershaft bushings	Oilite, ¾" bore, 1" long, 1⅛" O.D.
Countershaft tube	1⅛" I.D. steel
Pillow blocks	Boston Gear, #BNM with 1" bore
Ball joints	Amroc

Signs Seen: PUT IT DOWN!—on a fellow's garage door. (He saves more darn car radio antennas that way.)

Now...choose your vocational training!

new "choose-it-yourself" training system guarantees CHOICE, not chance

Now you can train in a field you pick yourself! Under the Army's new "Choose-it-Yourself" Vocational Training System, *you* choose your vocational training . . . and it's guaranteed *before* you enlist. Here's your chance to get valuable training and practical experience in work you *enjoy!*

Here's how you "CHOOSE-IT-YOURSELF":

1. CHOOSE

...before enlistment!

Choose the vocational training *you* like from the categories currently available. Your Army recruiter will give you all information and advice you need.

2. QUALIFY

...before enlistment!

Take aptitude and physical examinations. To be eligible, you must have a qualifying aptitude score and meet minimum physical requirements for your choice.

3. KNOW

...before enlistment!

If you qualify, you *know* you'll *get* the vocational training you like! Your choice is written into your future Army record—guaranteed *before* you enlist.

CHOOSE, QUALIFY and KNOW...WITHOUT OBLIGATION!

Choose from Radar & TV Repair, Electronics, Surveying, Automotive Maintenance, Atomic Weapons, Construction, Military Police, Machine Accounting and many more. Take your choice—without the slightest obligation to enlist. You *get* the Army vocational training *you* like—guaranteed in writing—or you *don't enlist!* This week, get details from your local Army recruiter.

NEW "CHOOSE-IT-YOURSELF" VOCATIONAL TRAINING SYSTEM

U.S. ARMY

Your Car Got Shakes?

[*Continued from page* 148]

car by continuous high speed driving over turnpikes. Even if wheels and tires are well balanced, there are the added strains to set up vibration that will loosen things unless they are kept tight.

Often engine fan vibration occurs at high speeds and a blade may be thrown, causing serious under-hood damage. The latest engine fans either cut out at speeds above 40 mph or operate at partial capacity instead of whirling like mad when not needed. Many engines set up their own special vibration because of excessive variation in compression between the cylinders. Weak valve springs may flutter or shimmy, adding to the unbalanced effect. Now throw in a whipping propeller shaft and you have quite a set of disturbing forces. Sometimes they will cancel out each other. That's why old timers used to declutch a moment if the car didn't seem to be running smoothly. It changed the relation between the engine and the drive line. You can do the same with an automatic drive by moving the selector lever to Neutral and then back to Drive again.

Loose motor mounts are a likely cause of engine vibration. With this handicap, engine gets out of alignment with the transmission. There also will be too much shake at idling and the air cleaner will set up a racket as it loosens up from sitting atop a nervous motor. Currently we're having a lot of trouble from too advanced ignition timing. With gas so high in octane value, it's hard to get the telltale "ping" and thus know if the timing is right for the fuel used. In trying to put your finger on the cause of engine roughness, don't forget that vibration damper at the front end. A damaged fan also can be suspected; likewise a broken compression ring on a piston. Unequal tappet clearance is another one to check.

Don't be surprised if what appears to be evidence of trouble is just something fairly normal of which you are a little too conscious at the moment. It may be wind roar, or those expansion joints in the older type concrete roads. •

Beautiful wood-paneled walls that last a lifetime—go up in a weekend!

Charter Birch paneling, preserved by exclusive Weldwood lacquer finish, has the look and feel of luxury—only $52 for a 12′ x 8′ wall.

Wood paneling does wonders for walls. These new Charter Birch panels, rich in swirls, burls and color variations, are cut to bring out the natural beauty of the wood. Change the style and color scheme of your rooms as often as you like—Weldwood wood paneling, guaranteed for the life of your home, flatters any color scheme you choose and any furniture style you own.

Install in a weekend. The 4′ by 8′ random-plank styled panels go up fast with no on-the-job fuss with finishing. Weldwood prefinished panels come ready-made to brighten your home. If you prefer, you can buy Weldwood Paneling *unfinished* at lower cost. See more than 70 types and finishes of Weldwood paneling at your Weldwood lumber dealer's or any of our 115 branch showrooms in U. S. and Canada.

No nail holes mar your handsome wood paneling when you put it up with Weldwood Contact Cement. Gives a permanent bond to furring strips. No clamping necessary.

WELDWOOD® PANELING

AND OTHER WELDWOOD PRODUCTS FOR HOME AND INDUSTRY.

SEND THIS COUPON TO GET DETAILS!

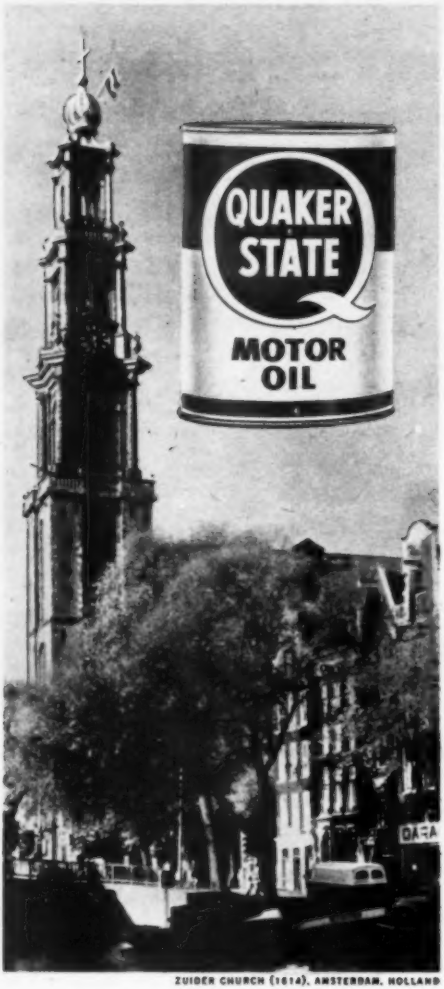
NEW PREFINISHED PANELING BOOK MI 3-59
United States Plywood Corporation
Box 61, New York 46, N. Y.

Please send me a copy of the new full-color folder, "Presenting Weldwood Prefinished Paneling for Fine Interiors," which beautifully illustrates in color the 14 Weldwood prefinished woods and gives complete installation details. I enclose 10¢.

Name.....

Address.....

City.....State.....



ZUIDER CHURCH (1614), AMSTERDAM, HOLLAND

On tour or around town, drive with Quaker State. This pure Pennsylvania oil is tested 24 hours a day in all types of engines. Skilled technicians check the oil's strength and endurance, its detergent action and temperature range. In the labs—and out on the test track—Quaker State proves that it protects all moving parts and stops acid action. Get this protection for your car with Quaker State!

QUAKER STATE OIL REFINING CORPORATION, OIL CITY, PA.

Member Penn. Grade Crude Oil Assn.

1859— 100th Anniversary of Drake Oil Well and Founding of the Petroleum Industry —1959

Golden Hammer Awards

[*Continued from page* 123]

Richardton, N. D.; Howard F. Lind, Medford, Ore.; Herman V. Beuay, Ashland, Pa.; Andrew Feyo, Menominee, Mich.; Lt. Col. Beverly V. Pearson, Craig Air Force Base, Ala.; E. P. Garlepy, Kirkland Lake, Can.; John F. Tomich, Belleville, Ill.; Douglas Lube, Manville, N. J.; William H. Nolte, Vichy, Mo.; Charles A. Schuster, Menomonie, Wis.; Carl J. Conkle, Muncie, Ind.; Robert W. Reed, Tyler, Tex.; Harry L. Howard, Fresno, Calif.; Glenn W. Hirschi, Port Gamble, Wash.; W. M. Stowko, Alberta, Can.; Willis E. Miller, Haybi, Mo.; Russell E. Payne, Minneapolis, Minn.; Edward A. Pontzer, St. Marys, Pa.; George Buttrick, Southington, Conn.; Robert E. Morrow, Warwick, R. I.; Edward Szurgat, Buffalo, N. Y.; Larry Knesel, Maywood, Calif.; Benjamin R. Gendusi, Trenton, N. J.; Jimmie Wells, Brownsville, Ky.; A. S. Burdick, Joshua Tree, Calif.; N. Sulcs, Claremont, Calif.; Edward L. Kuszmaul, Folsom, Pa.; Arthur Howard, Beacon, N. Y.; T/Sgt. Richard Eisenrich, Fairfield, Calif.

The following craftsmen have been awarded CERTIFICATES OF MERIT for their projects:

P. Simmonds, Surrey, England; Albert Bator, Sunnyside, Wash.; W. J. Groom, Worth, Mo.; Larry J. Ealy, Traverse City, Mich.; Stan Stolz, Fort William, Can.; Asmus Bonniksen, Saybrook, Conn.; Sigvard A. Anderson, Iron Mountain, Mich.; Michael A. Costanza, El Monte, Calif.; H. Ronald Magee, Summit Hill, Pa.; Deane L. Trumble, Watseka, Ill.; Harold Sudbrock, Wentzville, Mo.; Bob Hill, Grand Rapids, Minn.; Lt. Harold T. Guetzlaff, Little Silver, N. J.; Harold A. Ross, Falls Creek, Pa.; Roy McDanile, Orange, Tex.; Richard L. Sweet, Muskegon, Mich.; Joseph Hillmann, Patterson, N. J.; Fred R. Taylor, Roseville, Ill.; Raymond Carr, British Columbia, Can.; Robert Nelson, Spring Lake Heights, N. J.; Rolf Kuis, Alberta, Can.; Joseph A. Kosnosky, Friedens, Pa.; James Wanda, Jr., Baltimore, Md.; John P. Chapman, Huntington, W. Va.; Wilson F. Clemens, San Gabriel, Calif.; Floyd Palmer, Oklahoma City, Okla.; Gilbert H. Glasow, Santa Rosa, Calif.; Betty-Lee Campbell, East Corinth, Me.; E. V. Hildebrandt, Pittsburg, Kan.; Charles L. Dohs, Long Beach, Calif.; Charles R. Sikorski, Hollywood, Ill.; Neil Andrew, Jr., Lowell, Mich.; Glen O. Bachman, Butler, Pa.; Ferdinand Lorsel, Granada Hills, Calif.; Walter Leman, Metamora, Ill.; Russell L. Spraque, Marshfield, Mass.; Homer B. Hill, Miamisburg, Ohio; Julius Szalo, South Bend, Ind.; Gordon G. Pratt, Pierre, S. D.; S/Sgt. Gilbert L. Isley, Phoenix, Ariz.; H. G. Lemmon, Ontario, Can.; Charles Swezy, Hawley, Pa.; Joseph J. Paoli, South Range, Mich.; J. M. Carter, Louisville, Ky.; Arthur Fuess, Alton, Ill.; Richard Grafe, Palisades Park, N. J.; Charles F. Loeell, Pilot Mountain, N. C.; Nicholas Jaworovich, Union City, N. J.; James Bevell, Chattanooga, Tenn.; Walter J. Iber, Jr., Pekin, Ill.; D. T. Clapp, Brocton, Ill.; M. Andrew Hinegardner, Lonsdale, Ark.; W. H. Bunting, Ontario, Can.; Andrew H. Jung, Glenwood, Ill.; J. N. Bowerman, Ontario, Can.; E. W. McCall, Laurinburg, N. C.; Howard E. Moody, Upper Jay, N. Y.; Wayne Allen Cline, East Liverpool, Ohio; Richard L. Anderson, Cherokee, Iowa; George R. Markwood, Euclid, Ohio; Ray W. Luedeke, New Bremen, Ohio.

Watch for names of more winners next month.

NEW PORTER-CABLE SAW with all the professional features

KICKPROOF CLUTCH—Automatically puts saw into "neutral" if it jams or pinches in the cut. Prevents kickback for all around safety.

TELESCOPING SAFETY GUARD—New design of telescoping guard eliminates jamming and "drag" at the start and during any type cut.

POWERFUL—Model 66 has full 8 amp power for all types of work. Accessory rip guide is used for fast, accurate ripping.

Now you can have professional performance at a new low price! This powerful Model 66 Saw is loaded with all the famous and exclusive features found on Porter-Cable professional models.

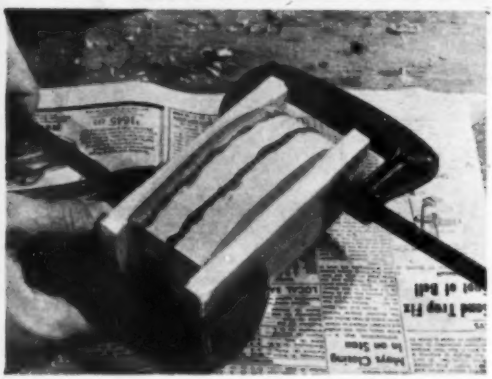
Now you can make every possible cut, including compound miters—zip thru 2 x 4's! This safest-to-operate saw has all kinds of instant depth and bevel adjustments for supreme accuracy . . . weighs only 8½ lbs. perfectly balanced — built for long wear and trouble-free service.

See it at your dealers, heft it, try it—and you'll agree that you need one.

Porter-Cable
Quality Power Tools

PORTER-CABLE MACHINE COMPANY
9263 Marcellus Street, Syracuse, N. Y.

Sit Down And Shine



USE TWO CLAMPS over a couple of pieces of scrap wood when gluing shoe form together.

a shoe on the form and swing it onto the platform where it is held in place by wedged tension. A rubber garden hose washer is used to position the pipe in the tee.

Cut out the wood pieces on a jig or band saw, mortising the two outer sections of the platform. Remove pipe and temporarily assemble platform for shaping.

Glue together the three parts of the shoe form and shape with a knife, completing the job with a rasp and sandpaper. Finish the wood with paint or stain and the pipes with aluminum paint.—*R. J. Capotosto*

SHOE is slipped over form, then swung over and wedged firmly against platform to shine.

Make Your Own Sails

[*Continued from page* 138]

you're ready for the clew, head and tack reinforcements (drawings 5 and 6). The patches are sewn across the arc first and, as in all cases where you sew a raw edge, the zig-zag stitch should be made wider and closer. For simplicity, I kept my bindings to the relatively narrow width of three inches, cutting the strips on the straight of the material and joining them where necessary for length. The bindings were first straight-stitched along the raw edges and then zig-zagged over. The cappings go on last, over the bindings and patches, at which point you're sewing through seven thicknesses of material.

The ropes, when finished, should look like they're sitting atop the sail's edges (drawing 7). I hand-whipped them on with the stitching almost hidden. They extend around the foot and the luff and are tapered to nothing 18 inches down each end of the leach. A narrow strip of sailcloth is straight-stitched over these tapered ends.

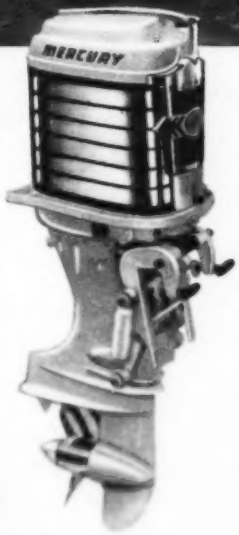
Adding the grommets, mainsail slides, jib snaps, reef points and batten pockets completes the sail. I put three grommets in the head, clew and tack, but one large one is conventional and sufficient. Space your mainsail slides and jib snaps about 12 inches apart. Overcast on them well but not too tight. Don't attempt measuring the reef points until you've fitted the sail to the mast and boom. I once did and wound up with something resembling a flight of stairs. Make the patches of a size to conform to the proportions of the sail (drawing 8) and place the bronze rings about four feet above the boom, spacing them about 12 inches apart. One row may be sufficient; if not, another can be added above. Batten pockets are lined up with the bites and sewn to one side of the sail with a zig-zag stitch. They have off-set openings to keep the battens from sliding out.

If you'll be storing your sails by lashing and covering them on the booms, be sure to make them mildew-proof with a fungicide. Otherwise, make monogrammed bags to carry them to and from the boat and dry them thoroughly after each outing. •

Bring on your most luxurious outboard cruisers . . . put a weekend load aboard! The Mark 78A planes 'em! Hitch on half-a-dozen skiers. The Mark 78A lifts 'em from deep-water starts!

MERCURY THE MOST POWERFUL NAME IN OUTBOARD PLEASURE!

Photographed at Florida's Silver Springs



MARK 78A
70 hp, 6-in-line

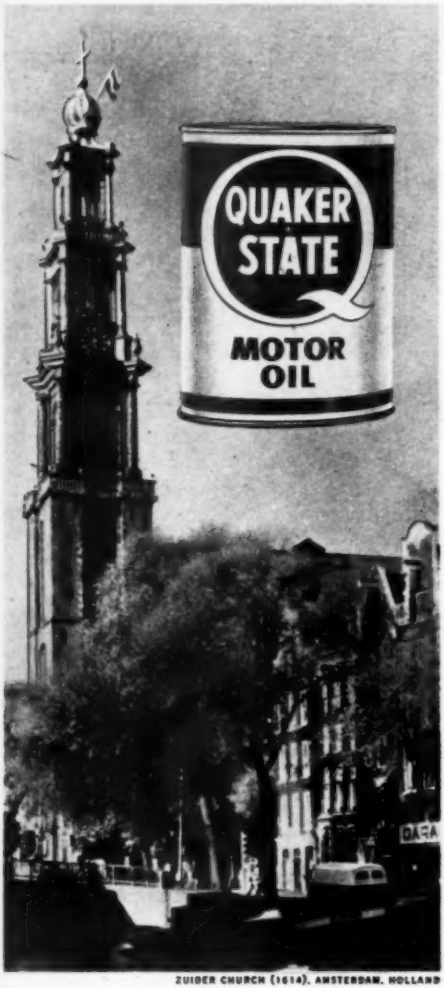
World's Most Powerful Family Outboard. Exclusive HYDRAULIC DYNA-SHOCK ABSORBERS plus Safety-Tilt Switch protect boat, motor and passengers — restrain motor kick-up from underwater obstacles . . . return motor to water to avoid loss of steering. Exclusive FIXED-JET CARBURETORS eliminate all adjustments except for idle, as on your car. Truly the outboard of the year and of all time!

THE WORLD RECORD LINE FOR '59 — 6 to 70 hp!

Unequalled thrust power for more fun per dollar, more work per dollar — yet so slim, trim and light that it's a perfect partner for speedy runabouts! Mercury's exclusive 6-in-line design gives you the *most* horsepower per pound, per cubic inch, per dollar; the most miles per gallon — the most propeller thrust per horsepower. *Certified* 50,000-mile dependability, 100+ mph durability! Exclusive single-lever one-hand control combines electric starting, choke, forward, reverse and throttle . . . shifts far faster, far more safely than old-fashioned gear shifts — without jolt or clashing gear noise — and bronze or aluminum propellers may be used! The engine that stays young for years is yours with Mercury. See your dealer for the rest of the story and a *free* demonstration ride!

Write for FREE Catalog. Address Dept. M1-3

©1959 Kiekhaefer Corporation, Fond du Lac, Wisconsin



ZUIDER CHURCH (1614), AMSTERDAM, HOLLAND

On tour or around town, drive with Quaker State. This pure Pennsylvania oil is tested 24 hours a day in all types of engines. Skilled technicians check the oil's strength and endurance, its detergent action and temperature range. In the labs—and out on the test track—Quaker State proves that it protects all moving parts and stops acid action. Get this protection for your car with Quaker State!

QUAKER STATE OIL REFINING CORPORATION, OIL CITY, PA.

Member Penn. Grade Crude Oil Assn.

1859— 100th Anniversary of Drake Oil Well and Founding of the Petroleum Industry —1959

Golden Hammer Awards

[*Continued from page* 123]

Richardton, N. D.; Howard F. Lind, Medford, Ore.; Herman V. Beuey, Ashland, Pa.; Andrew Feyo, Menominee, Mich.; Lt. Col. Beverly V. Pearson, Craig Air Force Base, Ala.; E. P. Garlepy, Kirkland Lake, Can.; John F. Tomich, Belleville, Ill.; Douglas Lube, Manville, N. J.; William H. Nolte, Vichy, Mo.; Charles A. Schuster, Menomonie, Wis.; Carl J. Conkle, Muncie, Ind.; Robert W. Reed, Tyler, Tex.; Harry L. Howard, Fresno, Calif.; Glenn W. Hirschi, Port Gamble, Wash.; W. M. Stowko, Alberta, Can.; Willis E. Miller, Hayti, Mo.; Russell E. Payne, Minneapolis, Minn.; Edward A. Pontzer, St. Marys, Pa.; George Buttrick, Southington, Conn.; Robert E. Morrow, Warwick, R. I.; Edward Szurgat, Buffalo, N. Y.; Larry Knessel, Maywood, Calif.; Benjamin R. Gendusi, Trenton, N. J.; Jimmie Wells, Brownsville, Ky.; A. S. Burdick, Joshua Tree, Calif.; N. Sulcs, Claremont, Calif.; Edward L. Kuszmaul, Folsom, Pa.; Arthur Howard, Beacon, N. Y.; T/Sgt. Richard Eisenrich, Fairfield, Calif.

The following craftsmen have been awarded CERTIFICATES OF MERIT for their projects:

P. Simmonds, Surrey, England; Albert Bator, Sunnyside, Wash.; W. J. Groom, Worth, Mo.; Larry J. Ealy, Traverse City, Mich.; Stan Stolz, Fort William, Can.; Asmus Bonniksen, Saybrook, Conn.; Sigvard A. Anderson, Iron Mountain, Mich.; Michael A. Costanza, El Monte, Calif.; H. Ronald Magee, Summit Hill, Pa.; Deane L. Trumble, Watseka, Ill.; Harold Sudbrock, Wentzville, Mo.; Bob Hill, Grand Rapids, Minn.; Lt. Harold T. Guetzlaff, Little Silver, N. J.; Harold A. Ross, Falls Creek, Pa.; Roy McDanile, Orange, Tex.; Richard L. Sweet, Muskegon, Mich.; Joseph Hillmann, Patterson, N. J.; Fred R. Taylor, Roseville, Ill.; Raymond Carr, British Columbia, Can.; Robert Nelson, Spring Lake Heights, N. J.; Rolf Kuis, Alberta, Can.; Joseph A. Kosnosky, Friedens, Pa.; James Wands, Jr., Baltimore, Md.; John P. Chapman, Huntington, W. Va.; Wilson F. Clemens, San Gabriel, Calif.; Floyd Palmer, Oklahoma City, Okla.; Gilbert H. Glasow, Santa Rosa, Calif.; Betty-Lee Campbell, East Corinth, Me.; E. V. Hildebrandt, Pittsburg, Kan.; Charles L. Dohs, Long Beach, Calif.; Charles R. Sikorski, Hollywood, Ill.; Neil Andrew, Jr., Lowell, Mich.; Glen O. Bachman, Butler, Pa.; Ferdinand Lorsel, Granada Hills, Calif.; Walter Leman, Metamora, Ill.; Russell L. Sprague, Marshfield, Mass.; Homer B. Hill, Miamisburg, Ohio; Julius Szalo, South Bend, Ind.; Gordon G. Pratt, Pierre, S. D.; S/Sgt. Gilbert L. Isley, Phoenix, Ariz.; H. G. Lemmon, Ontario, Can.; Charles Swezy, Hawley, Pa.; Joseph J. Paoli, South Range, Mich.; J. M. Carter, Louisville, Ky.; Arthur Fuess, Alton, Ill.; Richard Grafe, Palisades Park, N. J.; Charles F. Locell, Pilot Mountain, N. C.; Nicholas Jaworovich, Union City, N. J.; James Bevell, Chattanooga, Tenn.; Walter J. Iber, Jr., Pekin, Ill.; D. T. Clapp, Brocton, Ill.; M. Andrew Hinegardner, Lonsdale, Ark.; W. H. Bunting, Ontario, Can.; Andrew H. Jung, Glenwood, Ill.; J. N. Bowerman, Ontario, Can.; E. W. McCall, Laurinburg, N. C.; Howard E. Moody, Upper Jay, N. Y.; Wayne Allen Cline, East Liverpool, Ohio; Richard L. Anderson, Cherokee, Iowa; George R. Markwood, Euclid, Ohio; Ray W. Luedeke, New Bremen, Ohio.

Watch for names of more winners next month.

NEW PORTER-CABLE SAW with all the professional features

KICKPROOF CLUTCH—Automatically puts saw into "neutral" if it jams or pinches in the cut. Prevents kickback for all around safety.

TELESCOPING SAFETY GUARD—New design of telescoping guard eliminates jamming and "drag" at the start and during any type cut.

POWERFUL—Model 66 has full 8 amp power for all types of work. Accessory rip guide is used for fast, accurate ripping.

Now you can have professional performance at a new low price! This powerful Model 66 Saw is loaded with all the famous and exclusive features found on Porter-Cable professional models.

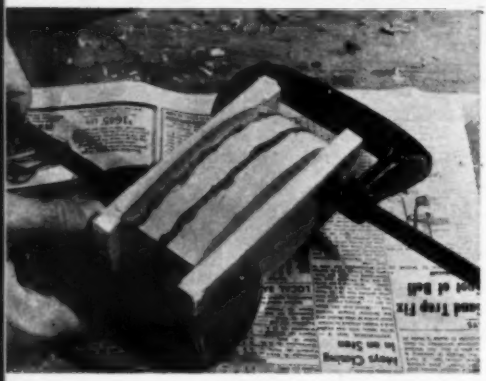
Now you can make every possible cut, including compound miters—zip thru 2 x 4's! This safest-to-operate saw has all kinds of instant depth and bevel adjustments for supreme accuracy . . . weighs only 8½ lbs. perfectly balanced — built for long wear and trouble-free service.

See it at your dealers, heft it, try it—and you'll agree that you need one.

Porter-Cable
Quality Power Tools

PORTER-CABLE MACHINE COMPANY
9263 Marcellus Street, Syracuse, N. Y.

Sit Down And Shine



USE TWO CLAMPS over a couple of pieces of scrap wood when gluing shoe form together.

a shoe on the form and swing it onto the platform where it is held in place by wedged tension. A rubber garden hose washer is used to position the pipe in the tee.

Cut out the wood pieces on a jig or band saw, mortising the two outer sections of the platform. Remove pipe and temporarily assemble platform for shaping.

Glue together the three parts of the shoe form and shape with a knife, completing the job with a rasp and sandpaper. Finish the wood with paint or stain and the pipes with aluminum paint.—*R. J. Capotosto*

SHOE is slipped over form, then swung over and wedged firmly against platform to shine.

Make Your Own Sails

[*Continued from page* 138]

you're ready for the clew, head and tack reinforcements (drawings 5 and 6). The patches are sewn across the arc first and, as in all cases where you sew a raw edge, the zig-zag stitch should be made wider and closer. For simplicity, I kept my bindings to the relatively narrow width of three inches, cutting the strips on the straight of the material and joining them where necessary for length. The bindings were first straight-stitched along the raw edges and then zig-zagged over. The cappings go on last, over the bindings and patches, at which point you're sewing through seven thicknesses of material.

The ropes, when finished, should look like they're sitting atop the sail's edges (drawing 7). I hand-whipped them on with the stitching almost hidden. They extend around the foot and the luff and are tapered to nothing 18 inches down each end of the leach. A narrow strip of sailcloth is straight-stitched over these tapered ends.

Adding the grommets, mainsail slides, jib snaps, reef points and batten pockets completes the sail. I put three grommets in the head, clew and tack, but one large one is conventional and sufficient. Space your mainsail slides and jib snaps about 12 inches apart. Overcast on them well but not too tight. Don't attempt measuring the reef points until you've fitted the sail to the mast and boom. I once did and wound up with something resembling a flight of stairs. Make the patches of a size to conform to the proportions of the sail (drawing 8) and place the bronze rings about four feet above the boom, spacing them about 12 inches apart. One row may be sufficient; if not, another can be added above. Batten pockets are lined up with the bites and sewn to one side of the sail with a zig-zag stitch. They have off-set openings to keep the battens from sliding out.

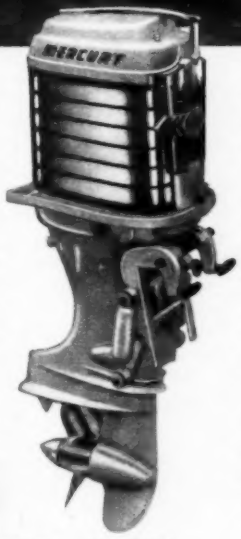
If you'll be storing your sails by lashing and covering them on the booms, be sure to make them mildew-proof with a fungicide. Otherwise, make monogrammed bags to carry them to and from the boat and dry them thoroughly after each outing. •

When answering advertisements please mention MECHANIX ILLUSTRATED

Bring on your most luxurious outboard cruisers . . . put a weekend load aboard! The Mark 78A planes 'em! Hitch on half-a-dozen skiers. The Mark 78A lifts 'em from deep-water starts!

MERCURY THE MOST POWERFUL NAME IN OUTBOARD PLEASURE!

Photographed at Florida's Silver Springs



MARK 78A
70 hp, 6-in-line

World's Most Powerful Family Outboard. Exclusive HYDRAULIC DYNA-SHOCK ABSORBERS plus Safety-Tilt Switch protect boat, motor and passengers—restrain motor kick-up from underwater obstacles . . . return motor to water to avoid loss of steering. Exclusive FIXED-JET CARBURETORS eliminate all adjustments except for idle, as on your car. Truly the outboard of the year and of all time!

Find Your Nearest Dealer in The Yellow Pages

KIEKHAEFER MERCURY

THE WORLD RECORD LINE FOR '59 — 6 to 70 hp!

Unequalled thrust power for more fun per dollar, more work per dollar — yet so slim, trim and light that it's a perfect partner for speedy runabouts! Mercury's exclusive 6-in-line design gives you the *most* horsepower per pound, per cubic inch, per dollar; the most miles per gallon — the most propeller thrust per horsepower. *Certified* 50,000-mile dependability, 100+ mph durability! Exclusive single-lever one-hand control combines electric starting, choke, forward, reverse and throttle . . . shifts far faster, far more safely than old-fashioned gear shifts — without jolt or clashing gear noise — and bronze or aluminum propellers may be used! The engine that stays young for years is yours with Mercury. See your dealer for the rest of the story and a *free* demonstration ride!

Write for FREE Catalog. Address Dept. MI-3

©1959 Kiekhaefer Corporation, Fond du Lac, Wisconsin

Pleasant Laundry Room

[Continued from page 145]

FINISHED LAUNDRY ROOM will also serve as an ideal ironing and sewing headquarters.

sive to the back of a panel, press into place, then nail in the metal clips which hold the panels while the adhesive sets. Follow this same general procedure for the walls.

Work around cabinet and sink requires special care in cutting and fitting. Before installing panels around sink top, lay a ribbon of waterproof caulking in the molding channels. Application of cove molding around the top of the walls, and baseboard molding at floor level, completes the walls.

Use a jig saw to cut openings in the sliding cabinet doors. The opening for the back panel will be one inch larger around the inside to form a rabbet. Coat with contact cement and join the panels back to back.

The perforated steel plates (they are available from Cross Engineering in Carbondale, Pa.) are cut to fit into a rabbet and secured with glazier's clips forced between the cemented panels. To add rigidity to the longer closet door a layer of quarter-inch plywood was sandwiched between the frame of the door. A removable grid was also installed in front of the air shaft window. With the laying of the asphalt tile floor the job is completed. •

Black-Top Patio

[Continued from page 124]

The asphalt will be easier to work on a hot sunny day. If the weather is cold, the asphalt can be softened by setting fire to the paper bag and the solvent in a cleared open space.

Apply the asphalt to a thickness of one inch, spread out evenly with a rake shovel, then tamp down with a lawn roller. If any indentations remain that will form puddles when it rains, level them off with additional asphalt; high spots can be cut down with a wide shovel. Continue leveling until the roller moves smoothly and evenly over the surface. In an hour the surface will harden enough to walk on and a car can be driven over it after several hours. To further harden the surface sprinkle some fine Portland cement over it. Finally, cover the surface with a bonding primer.

This asphalt has certain advantages over concrete. For one, it is resilient and less apt to be damaged by frost. Concrete, on the other hand, must usually be poured to a thickness of at least six inches to withstand freezing temperatures without cracking. Also, concrete requires a gravel base and suitable footings.

Black-top patios can be put down on any firm, level ground—even over grass. Pre-pouring preparations consist merely of setting a frame of 1x3-inch boards around the patio area. These serve as a guide when you level off the surface. If the patio adjoins the house, the guide boards should be pitched to allow water to run off *away* from the house—a pitch of one inch every six feet is sufficient.

Chances are you'll prefer your patio to be another color than black. If so, a special mastic coating called Laykold—which comes in several colors including red, green and gray—can be applied.

Since cold asphalt adheres to any surface, it can be used for quick repair jobs on driveways, sidewalks and porches. Once you put this easy-to-work material to the test you'll always keep a sack in reserve in the garage.

(Note: Cold asphalt mixes and supplies are available from large hardware, garden supply stores and from builder's supply yards. Manufacturers are: Cold Mix, Inc., New Milford, Conn.; Middle West Roads Company, Louisville, Ky.; Campbell Products, Towson, Md.; Sicilian Asphalt Paving Co., New York, N. Y.; Standard Bitulithic Co., North Baldwin, N. Y.; Westchester Asphalt & Distributing Co., White Plains, N. Y.; Westchester Colprovia Corp., New Rochelle, N. Y.; General Crushed Stone Co., Easton, Pa.; Quick-Crete Corp., Lincoln, R. I.; and Gulf Bitulithic Co., Houston, Texas.) •

WRIGHT SAW $39.950.00

NATIONWIDE GIVEAWAY

JUST FOR LOOKIN' AT FREE DEMONSTRATION TO INTRODUCE THE AMAZING NEW

WRIGHT® POWER BLADE SAW

The world's safest power saw all-in-one successor to your hand saw, chain saw, crosscut saw and buck saw.

YOU MAY

WIN A $39.95 SPRAYIT 400

COMPLETE PAINT SPRAYING OUTFIT

1000 GIVEN AWAY FREE!

Nationally advertised $39.95 SPRAYIT 400—not a vibrator, but an integral ½ H.P. motor-compressor, complete professional outfit! Sprays all types of paints, lacquers, insecticides. Paint a toy or a barn.

Nothing to buy, write or guess! Just go see your *Wright* saw dealer demonstrate this amazing new kind of power saw. Dealer registers your name for PRIZE DRAWING. *Every* winner gets a *Sprayit 400* complete, ready to paint with, FREE. This is to introduce you to the *Wright* Saw. Works on revolutionary new principle. Single 20" power blade works back and forth, 166 STROKES A SECOND. *No dangerous chain!* Fells, limbs, bucks, undercuts, clears land, prunes, cuts strip silage, precision cuts, leaves mill edge. Try it yourself at your *Wright* saw dealer's. You may win a $39.95 *Sprayit 400*—FREE.

U.S. Suggested List Price

$189.50

Includes 20" Blade, Complete, Ready to Work.

OFFER EXPIRES MARCH 31, 1959—MAIL COUPON RIGHT NOW!

THOMAS INDUSTRIES INC.
WRIGHT SAW DIVISION
Executive Office: 410 S. Third St.
Louisville 2, Ky.

THOMAS INDUSTRIES INC., Wright Saw Division, Dept. 70-C
410 S. Third St., Louisville 2, Ky.

☐ Send name of my nearest Wright saw dealer and FREE illustrated booklet, "Easy Steps to Woodcutting."

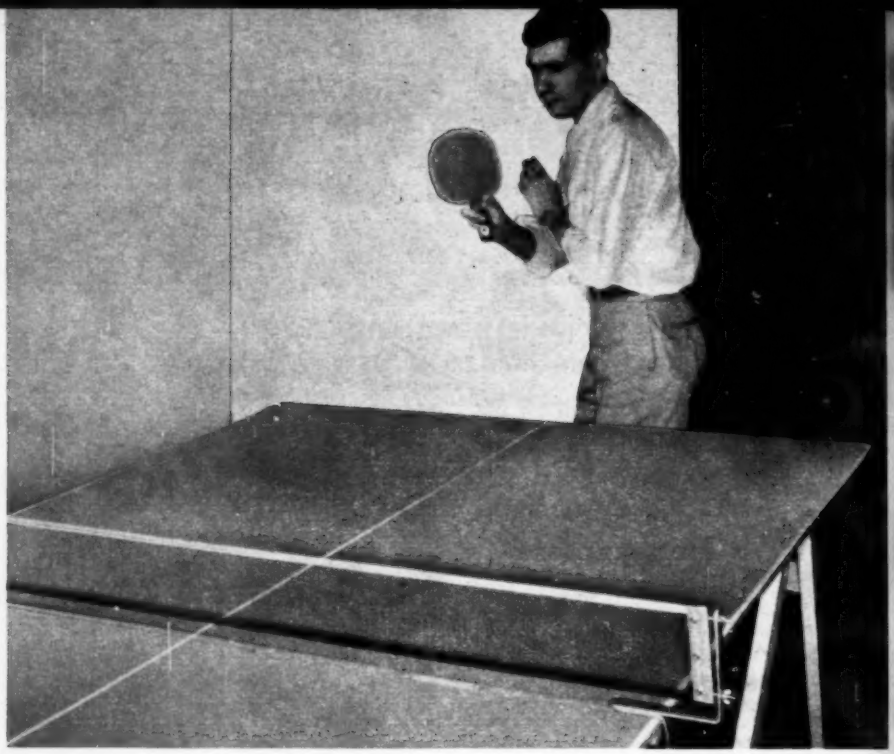
☐ My favorite hardware, sporting goods or implement store is:

Name of store_____

My name_____

Address_____

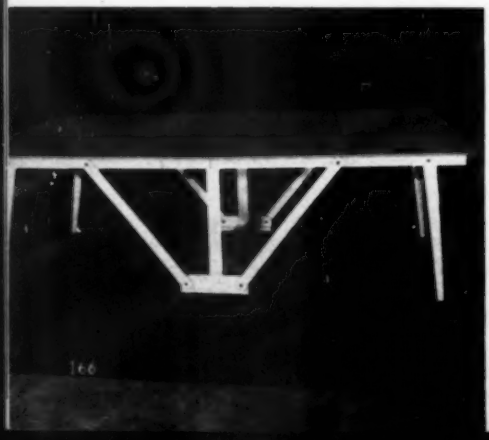
City_____ Zone____ State_____



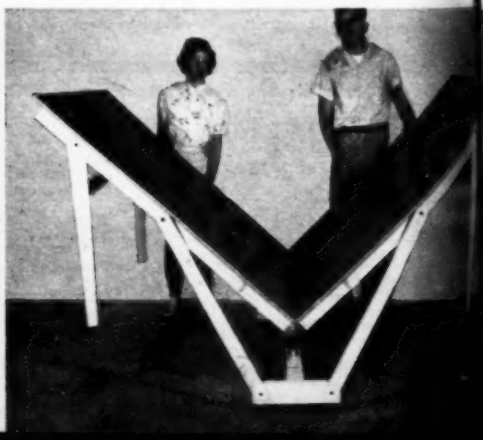
ENJOY your favorite game on a table that can be collapsed and rolled away for storage.

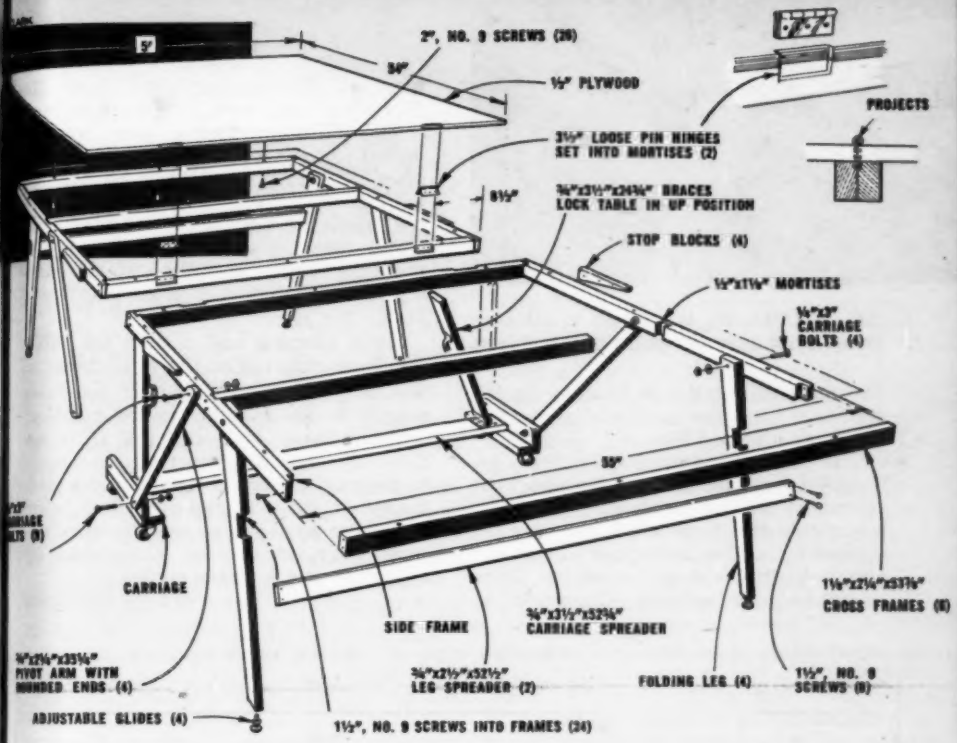
FOLDING PING-PONG TABLE

OPEN TABLE is well supported at center. Adjustable glides are used on corner legs.



HINGED UPRIGHTS at center are pushed in and down and the table folds in a jiffy.





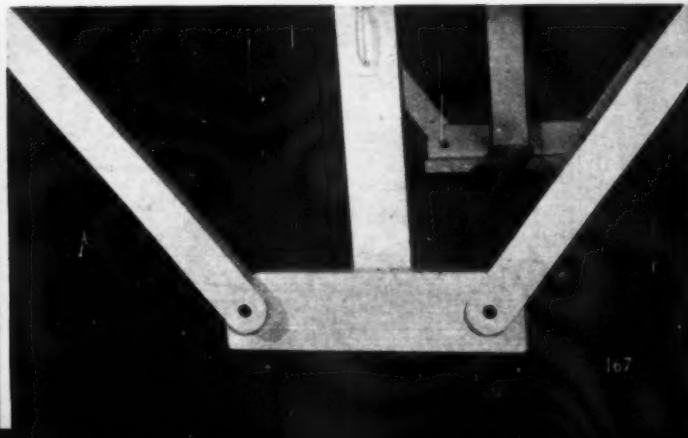
HERE'S a Ping-pong table that should find wide acceptance in many homes. It folds and unfolds in a jiffy and can be rolled aside quickly to provide space for other activities.

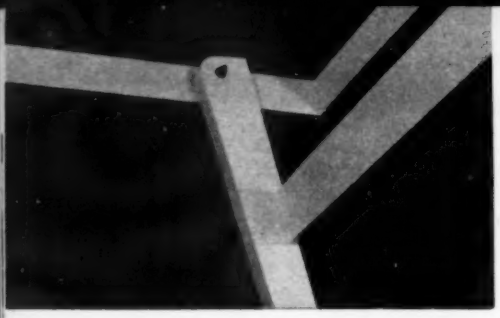
Construction is simple. Cut all parts according to the specifications shown on the plans, bore the holes carefully and sand the pieces smooth. You can then begin assembly.

Start with the top frame, assembling it with glue and flathead wood screws. When the parts are together, locate the positions of the stop blocks on the sides and glue and screw them in place. Then secure the 3½-inch loose-pin hinges in

FOLDED TABLE is compact, mobile. Notice center uprights on the bottom crosspiece.

CARRIAGE, fitted with casters, is simple to build. Angled supports pivot on bolts.





LEG ASSEMBLIES are bolted to table-top frame, pivot inward when table is folded.

the mortises, being sure to allow for the fact that the pins protrude above the half-inch plywood top.

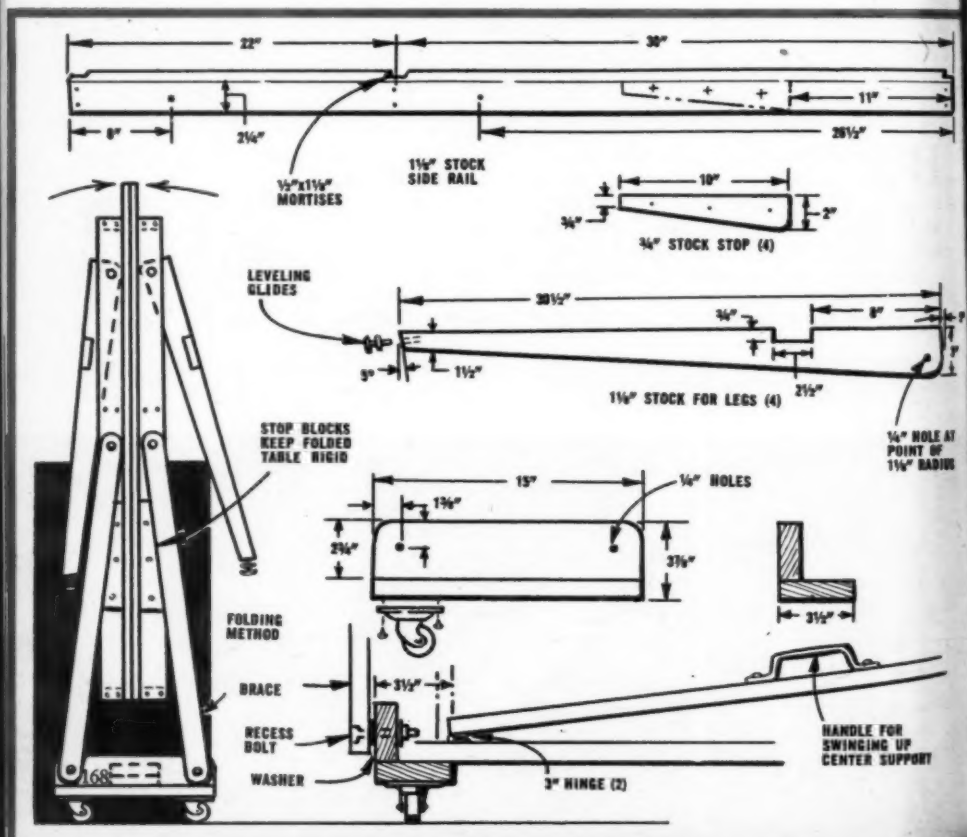
The two-leg end units are quickly assembled by gluing and screwing the spreaders in the mortises. Then the adjustable glides are attached.

Next make the carriage as shown and attach the two hinged uprights three inches in from the ends. Then add the two-inch plate casters and attach the four pivot arms with bolts and washers.

The table-top frame may now be bolted to the pivot arms and leg assemblies. The top itself may be secured with screws through the underside of the frame or with angle brackets. In either case, use screws short enough so that they won't break through the playing surface. A coat of green paint completes the job.

Upon opening and closing the table, you'll quickly notice the importance of the stop blocks. They hold the table snugly in an upright, folded position; without them, it would fall to either side. The center supports are necessary to prevent accidental closing of the table if any weight is placed near the center. If there is any twist or sag due to an uneven floor, it can be eliminated by adjusting the leveling glides.

—*Walter Kulawiec*



Diaphragm Speaker

[*Continued from page* 134]

leading edges of the enclosure with fine sandpaper, slightly rounding the inner lip.

Now you are ready to install the muslin diaphragm. Use unbleached, 80-thread muslin, 36 to 39 inches wide and 48 inches long. Fold it in half and put a pencil mark at the edge of the folds, front and back. Fold again, in quarters, and pencil-mark the edges of the folds. To stretch-fit the port in the resonator, the hole in the muslin must be undersize (5½ inches), so make a quarter circle using a piece of heavy cardboard with a radius of 2¾ inches. Mark and cut the port opening while the muslin is still folded.

Now here's where those pencil marks at the hems of the four-folds come in. Find the top, bottom and centers of the sides of the inner lip of the resonator port. Line up the centering marks on the muslin. Force the muslin down into resonator port at one of the centering marks until the edge of the muslin is even with the *back* of the resonator. Put in a staple near the back edge and repeat this process on the three other quarters.

Now turn the enclosure on its side. Working from the back, fasten the muslin to the inner lip of the resonator port with three rows of closely placed staples.

Put the enclosure on its back again, line up one of the penciled center folds with the center of one side of the enclosure, draw it up tight and fix in place temporarily with a couple of staples.

Don't put the staples in too firmly; you'll have to remove about half of them later. Now, working toward one corner, stretch the muslin fairly tightly and evenly and staple at one-inch intervals. When you reach the corner go back and remove your first staple and any others necessary to take the soft spots out of the stretched muslin. You may have to repeat this process a third time before the muslin is smoothly stretched. When it is, fasten it in place with three rows closely placed staples and with the outside row as near the outer edge as possible.

Start at the center of the top or bottom and work toward the corner you have just finished. In removing and re-setting the staples be careful to avoid tearing the muslin. When the muslin diaphragm is securely stapled all around, fold the excess muslin as neatly and tightly as possible at the corners and stretch and hold it down with staples.

Almost a quart (seven coats) of airplane dope is required to set up the diaphragm. This must be applied with a fairly stiff two-inch brush. With the enclosure set on its back, start at one corner and brush the dope into the muslin quickly and fairly generously. Don't soak it through, or you'll get runs on the reverse side. After each coat, dip your index finger into the dope and rub it through the muslin wherever it contacts wood, especially at the edges.

Under normal conditions you can apply the second coat about 20 minutes after the first. If the muslin shows any damp spots dry them out with a heat lamp before continuing with the next coat.

The first two or three coats of dope will make the diaphragm soft and sodden, but from the third coat on the diaphragm will begin to tighten like a drum. Apply seven coats of dope—no more and no less.

When the last coat is thoroughly dry use a razor blade to trim off the excess muslin about $\frac{1}{16}$ inch from the edge.

The enclosure may be painted, given a natural finish or covered with sheet cork or fabric. Since the dope is of lacquer base, use only lacquers in your finishing. If you intend to cover the enclosure front with grille cloth and a picture frame trim, paint the diaphragm with black lacquer. Otherwise the diaphragm may be spray painted after a light sanding. For a free-standing enclosure install four-inch wood or metal furniture legs.

Most speakers are equipped with a cardboard gasket. If yours is not, make one of heavy cardboard and install your speaker to the resonator platform as firmly as possible with ¾-inch wood screws.

Now turn on your set, sink comfortably into your favorite armchair, and prepare your ears for some really good listening. •

Corks and screw-on covers won't stick on bottles of glue, polish, liquid cement, etc., if a little Vaseline is applied to them before they're replaced.

Brush-Dusting

PAINT BRUSH is fine for dusting irregular and confined components of a record player.

TYPEWRITER keys and parts defy cleaning by cloth but give up the dust to a brush.

WHISK THE IVORIES clean in even less time than it takes to play The Minute Waltz.

Darkroom Dryer

[*Continued from page* 154]

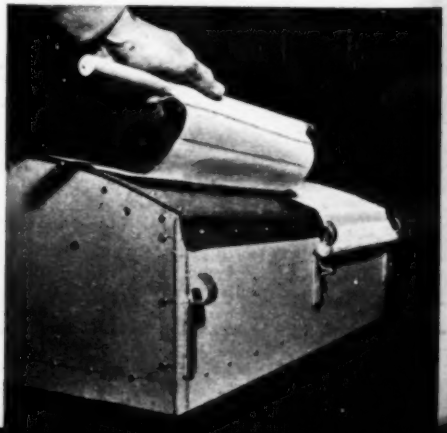
DRILL 9/64-inch cover holes at 3-inch intervals and then attach the cover with No. 6 screws.

Clamp a strip to a piece of wood, place on a flat surface, fit a panel up against it and clamp in place. Now drill the strip aiming through the predrilled holes in the panels. Attach the end and side panels to these base angles and then fit in the corner angles.

The guide lines for the heat deflector are scribed by starting from a point at the center of both ends and 5½ inches from the bottom, then drawing lines to the upper corners.

Attach the four heat deflector braces inside each end under the scribed lines. The porcelain base is then secured from below

OFFSET DOWEL FASTENERS facilitate separate handling. Note overlapping of the cover.



Darkroom Dryer

to the center of the dryer's floor.

The devices for securing the dowels to the dryer's side are shaped from ⅛x½x6-inch sheet metal pieces. Two $\frac{3}{16}$-inch stove bolts 1 and 1½ inches long are used to hold these in place. Small "lock plates" made of sheet metal and placed under the nuts will hold them when the bolts are tightened.

The sheet metal heat deflector measures 19½x24 inches and is shaped to conform to the lines scribed on the end panels. The similarly shaped primary deflector is spaced about three-quarters of an inch under the main deflector by the use of washers around the connecting bolt.

The heat deflector is shaped as shown in the diagram and attached to the corner braces with $\frac{3}{16}$-inch stove bolts. There should be about a half-inch space between it and the sides of the dryer. Now attach the cover by bending the edges over the sides of the dryer and secure with sheet metal screws.

Cut two 12½-inch strips from a square yard of eight-ounce duck and hem each one at the cut so that each piece is then 26 inches long. At the ends of each strip sew in a loop to accommodate the dowels, then drive in a few tacks to keep the dowels from slipping out. The canvas should fit over the prints snugly but not too tightly.

The dryer is now ready for use. About twenty minutes is required to preheat it. If any area remains noticeably cold this probably is due to the position of the heat deflector. Remove the cover and shift the deflector. If this doesn't remedy the fault, it may be necessary to cut away that portion of the deflector in the cool area.

The author uses three such units at a time. Each unit takes two 12x17-inch tins accommodating four 8x10 glossy prints. Single-weight pictures take about eight minutes to dry. Matte prints placed upside down on the plates dry evenly and without wrinkles. The drying time will vary depending on the pressure used in applying the prints to the ferrotype plates. Use a print roller for this job. If drying takes more than 10 minutes after preheating, check the element. These will vary in heat output although supposedly of the same wattage.—*Joseph Adams*

CALKING

OLD CALKING which is cracked and loose lets in cold, dampness; remove with a chisel.

GUN forces new calking well into groove; putty knife rubbed with soap removes spots.

PAINT the calking after a skin forms on it—and the woodwork, too, if you're ambitious.

Shooting In The Wind

[*Continued from page* 82]

yards. This was measured at 41 inches. He reasoned correctly that this bullet would fall straight to the ground from a height of 41 inches in the same time as that required for it to reach the 200-yard target. He dropped a bullet 41 inches straight down and measured the drift with a 20-mph wind blowing. It was .3 of an inch. Yet this bullet drifted slightly more than 33 inches in the same wind when fired at a target 200 yards away. It was in the air exactly the same time as the bullet dropped 41 inches. This is, however, about 100 times the drift when dropped straight down.

Motion and air friction are involved now, where before only gravity and wind speed acted appreciably. The joker is that a bullet doesn't continue on its way at the muzzle velocity, which was 3,000 feet per second in this case. Air resistance brings in our old friend lag. At the end of one second, our bullet had slowed down and traveled only 2,280 feet instead of 3,000 feet.

Not until one and one-half seconds after firing does the bullet travel 3,000 feet. Because of this late arrival, the bullet misses the target by 15 feet and old man lag wins another round.

The bullet will miss the target by exactly the same distance the existing wind traveled during the lag of the traveling bullet. The lag was 30 seconds and in that time the wind traveled 15 feet.

Note: To convert mph to feet per second, multiply by one and one-half. To discover distance the wind covered during lag, multiply the lag by speed of wind in fps (20 x 1.5 x .5). Wind deflection is therefore determined by the distance the wind moves during the time the bullet is delayed by lag.

Four factors are required knowledge when shooting in a wind: range, muzzle velocity, time of bullet flight and wind speed—all reduced to feet. With these factors, first find the lag. Divide the range by the muzzle velocity, then subtract the result by the actual time of flight to target. Once the lag is determined you can find the bullet deflection by the existing wind. Simply multiply the lag by the exact wind speed if the wind is from three or nine o'clock. If from two, four, eight or ten o'clock find the cross component of the wind by multiplying the speed by .9. If from one, five, seven or 11 o'clock, multiply by .5. To find the bullet deflection in these cases multiply the lag by the cross component of the existing wind.

What about wind speeds? A slight cooling of one side of a wet finger, held up when there seems to be no appreciable breeze, signals from one to two-mph air movement. A soft movement of air felt gently on the cheek may be a five-mph breeze. When you see the leaves on the trees move, or grass or weeds wave a bit, the wind velocity is something like ten mph. If the grass or weeds ripple in waves, the wind is probably about 15 mph. When blasts bend the tree tops and fling branches about wildly, you can bet you've got a 20-mph wind. A gale of 30 mph or more is too strong for successful rifle shooting.

All you have to do now is make up a chart of the wind deflection for each two and one-half miles per hour of wind over each 100 yards of range for the ammo you use, then memorize it—and you're in business.

The rest is up to you. Good luck! •

Economy Cars

[*Continued from page* 68]

when you can park a Rambler in a slot that you can't work a Mercury or a Lincoln into—but this doesn't happen often enough to raise too many gray hairs on the average motorist. Most of the time a number of well-balanced American cars, such as the rally-winning Imperial, handle just as easily on the road and can be whipped through traffic without any more effort than it takes to twist a Rambler, Volvo or Volkswagen. On the other hand, we do build some tremendous clunks of nothing that would be hard to maneuver down the runway of an abandoned airfield. No, I don't believe small size is the big reason. Economy of operation and low original price, yes—but not size. If my friend George Romney wishes to challenge this, I'll meet him in any big city traffic he cares to pick—he in a Rambler and me in an Imperial—and we'll have a little parking contest, with the loser contributing $1,000 to the American Red Cross.

Here *are* the reasons, starting with economy. Hundreds of young families recently moved to the suburbs need two cars, one for the old man to go to work, one for his wife Nell to haul gin to the PTA meetings. This guy can buy two brand-new Volkswagens for less dough than any typical medium-priced American car being peddled today. In addition to this, his operating expenses (meaning gas, oil and tires) for both these small imports will amount to less than keeping one juggernaut going half the distance.

Next we jump to quality of workmanship. The chrome on the $1,600 Volkswagen is superior to the chrome on any American car I know selling for more than $5,000. The foreign cars are more carefully screwed together, regardless of price, and you won't wear out your tires just making trips back and forth to the service station to get parts glued on the way they should have been at the factory. Good quality and trouble-free operation are tremendous factors in the popularity of the smaller imports. When one major manufacturer asked me if I thought his firm could buck the import market by bringing out a Volkswagen-size domestic car, I had to tell him, "No, because you'd have to use the same sloppy assembly methods and people you're using now on your more expensive cars—and you'd end up with just a lousy small car." Although this fellow was an executive vice-president, he wasn't shocked—he knew what I meant only too well. America hasn't a chance of mass-selling a small car with the low-quality standards of some of our highest-priced cars. The imports, in most cases, are built right. And, let's face it, there is a certain amount of snob-satisfaction in owning a car that comes from Europe.

When I hear the argument that the imports are selling well because they look so much better than our jukeboxes, that's a little hard to swallow, too. It's like Tugboat Annie calling Brigitte Bardot's looks "unfunctional." There are some good-looking imports—but there are also some that could be called good-looking only by a guy who'd admire two noses or three eyes. The imports that appeal to me do so for their individual qualities: not because they're smaller or cheaper or more economical to operate but because they are great characters all by themselves and real fun to drive, a factor Detroit seems to have forgotten to a large extent.

Of the small imports my particular favorite is the four-speed VOLVO. With a 97-cubic-inch engine it has all the whack of a sports car, feels like an MG through bends and corners and has an exhaust chortle that slightly ruffles the hair on your soul. It's as homely as a coal miner's boot and interior-wise it's just about the size of a pre-WW2 Plymouth, Ford or Chevrolet. I get more fun out of driving this car than nearly anything whipped out of Detroit. Its top speed of just under 100 mph will allow me to cruise the turnpikes easily at 70 mph while batting out better than 25 mpg on the cheapest pump gas. As you undoubtedly know, the car is made in Sweden and sells for $2,330 in New York City. You can drive it for five years without feeling outdated, as its looks won't be a bit lousier than they are now.

My second favorite is also a Swede, called the SAAB. This is a real off-beat little bucket with the guts of a mother gorilla. It is powered by a three-cylinder, two-cycle, liquid-cooled, outboard-motor-type engine. It has won more important rallies and contests over rough terrain than Lawrence Welk has smiles and is the only front-wheel-drive rig I've ever driven that was completely easy to steer. In its Gran Turismo form, for less than $2,600 you have a car ready to tackle any major rally in the world. In its Plain Jane suit it sells for under $1,900. It seats four comfortably and the back of the rear seat folds down, opening into the trunk compartment to make a bed, just in case you're tired of contributing to Old Man Hilton's enterprises. [*Continued on page* 174]

Steam-Powered Tugboat

This model replica of the Esso Honduras was designed to run on steam power, but the plans also show an alternate installation of a battery-powered motor. Instructions and full-scale plans can be obtained for 50 cents from MECHANIX ILLUSTRATED Plans Service, Fawcett Building, Greenwich, Conn. When ordering specify Plan No. M-225, Tug Boat.

STUCK garage DOOR?

QUICK! Get it moving and keep it running smoothly with dependable 3-IN-ONE. Lubricates, cleans, prevents rust. On sale everywhere.

3-IN-ONE OIL

REGULAR · OIL SPRAY · ELECTRIC MOTOR

"MINIATURE MACHINE SHOP

No Bigger Than A Typewriter, Outperforms Machines Many Times Its Size!"

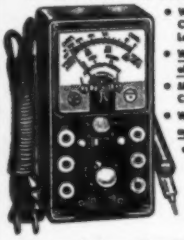
That's what Mechanix Illustrated says about UNIMAT in their 3 page feature story in the May issue. If you want a reprint of this story plus complete information about this amazing 10 in 1 combination precision tool write to:

AMERICAN EDELSTAAL INC., UNIMAT DIV Dept MI-3, 350 B'way N Y 13

Superior's New Model 70 UTILITY TESTER®

FOR REPAIRING ALL ELECTRICAL APPLIANCES MOTORS • AUTOMOBILES • TV TUBES

As an electrical trouble shooter the Model 70:



- Will test Toasters, Irons, Broilers, Heating Pads, Clocks, Fans, Vacuum Cleaners, Refrigerators, Lamps, Fluorescents, Switches, Thermostats, etc.
- Will test all TV tubes for open filaments, interelement shorts, burned out tubes, etc.
- Measures A.C. and D.C. Voltages, A.C. and D.C. Current, Resistances, Leakage, etc.
- Will measure current consumption while the appliance under test is in operation.
- Incorporates a sensitive direct-reading resistance range which will measure all resistances commonly used in electrical appliances, motors, etc.
- Leakage detecting circuit will indicate continuity from zero ohms to 5 megohms (5,000,000 ohms).

As an Automotive Tester the Model 70 will test:

• Both 6 Volt and 12 Volt Storage Batteries • Generators • Starters • Distributors • Ignition Coils • Regulators • Relays • Circuit Breakers • Cigarette Lighters • Stop Lights • Condensers • Directional Signal Systems • All Lamps and Bulbs • Fuses • Heating Systems • Horns • Also will locate poor grounds, breaks in wiring, poor connections, etc.

Model 70 comes complete including 64 page book, only..... **$15.85**

SHIPPED ON APPROVAL

NO MONEY WITH ORDER—NO C.O.D.

Try it for 10 days before you buy. If completely satisfied then send $15.85 and pay balance at rate of $4.00 per month for 3 months — No Interest or Finance Charge Added! If not completely satisfied, return to us, no explanation necessary.

MOSS ELECTRONIC, INC.
Dept.D-570, 3849 Tenth Ave., New York 34, N. Y.
Please rush Model 70. If satisfactory, I will pay on terms specified. Otherwise I will return tester.

Name _____

Address _____

City _____ Zone _____ State _____

All prices net F.O.B., N. Y. C.

Right behind these two I must rate the VOLKSWAGEN, the standard of the world for small cars. This is the greatest transportation buy since the Model T was selling for just over $300. The quality of this car, which has now been produced in the millions, has dropped several notches in the past few years, especially in material, but it is still good enough to rate third on my hit parade because of its fantastic re-sale value, reliability and 35 mpg even with careless cross-country driving. Due to its air-cooled rear-engine mounting it can damn near climb the side of an iceberg without losing traction. But if you get a little too fresh with it on the corners it can flip you into and under the daisies before you can count to three.

The above are my Top Three choices. After these, without any attempt at placing them in order, I'd select the French SIMCA, recently bought by the Chrysler Corporation. This is a big-small import, hitting the scales at 2,150 pounds, though its engine only displaces 78 cubic inches. It's comfortable, roadable and has a good turn of performance. The price for the standard model is $1,745. Also available is a convertible called the Oceane which is a real glamor barge with a price tag, unfortunately, of three grand.

The DKW is practically a German version of the SAAB. It's powered by a three-cylinder, two-stroke engine. In competition it has given the SAAB a good push but rarely can top it. The car has extremely fine brakes and top road-holding qualities. A great car for the rally enthusiast or for chasing down to the store for a pint of heroin.

From Pastafazool land we get the FIAT, which comes in more sizes than Howard Johnson has flavors and is one of the most respected names in the entire automotive industry. The small 500 and 600 series are a little smaller than I like my transportation. My choice would be the 1100, which can hardly be considered gigantic with an 1100-cc engine which develops 43 hp at 4800 rpm. The 1100 can be had either as a neat four-door sedan or a good-looking functional station wagon. In the 1200 series Fiat builds a roadster that has all the intrigue of an unlimited expense account in Paris. All Fiat components such as brakes, springs and shocks are on the big side for such a small car, as these little rigs were built to be whipped through the Alps

just north of Turino, the city of their birth. Though the top speed is close to 75 mph (85 mph for the roadster) and the mileage about 35 to the gallon, the 1100 is good transportation, short on sexy looks but with a heart of pure gold. The station wagon, however, has looks as station wagons go.

The Ford ZEPHYR, made in England by the Ford Motor Company, is a truly top-flight automobile. The Zephyr, selling for $2,193, is powered by a 155-cubic-inch, six-cylinder engine that develops 90 hp at 4400 rpm. It has a top speed of well over 80 mph and is one of the best handling cars in the small import group. It has plenty of room for four and has, in my opinion, better looks than many of the imports.

The Renault DAUPHINE is Volkswagens' closest competitor. Winner of the 1958 Monte Carlo Rally, this four-cylinder, rear-powered rig is one of the best import buys of its type available. Some of its shortcomings include pedals that are too small, crammed footroom and not as much usable inside space as the Volkswagen. These shortcomings can be annoying if you happen to be on the large side. However, its roadability is excellent, its traction on ice and snow is almost unbelievable and it has a top speed of just under 70. At speed the interior noise is nearly enough to sour the smile on Liberace unless he had his ears plugged. But you can't sell short the fact that in the toughest Monte Carlo Rally ever, through the snow and ice of the Alps, the Dauphine crashed through a winner while dozens of hotter cars slid off the road or were hopelessly blocked.

The HILLMAN Husky and Minx are two popular British Rootes products that have proven as reliable on these shores over the years as taxes and obituaries. The Husky is a station wagon displacing 85 cubic inches in the engine room and developing 43 hp. The Minx, which is the Hillman sedan with the same size engine and a different cam, develops 51 hp at 4400 rpm. This car is favored by many women because it is easier than some others to get into and out of and for its simplicity of operation. You don't have to have a Flight Engineer's training to run one. As already stated, however, reliability is the big factor here and dozens of Hillman owners I've spoken to swear by them. When I tested the Hillman I was impressed by its solid feel and top speed of a little over 70. This

NOW! HOME CRAFTSMEN CAN OWN THIS PROFESSIONAL ARC WELDER

EASY TERMS ONLY $98.50 F. O. B.

Trindl

FREE

WRITE FOR COMPLETE DETAILS AND EASY PAY PLAN

Now you can own a Trindl full 125 amp Industrial Welder at a price far less than smaller machines. With a Trindl 125A you can weld metals up to ⅛ inch thick. Operate off either 110 or 230 volt line, properly wired. 16 heat stages from 30 to 125 amps. Make and repair anything of metal around the home, garage, farm or shop, like a professional. No previous experience or training needed. Full "do-it-yourself" instructions with each machine. Complete only $98.50 f.o.b. factory, or write for details. Trindl manufactures a complete line of heavy duty welding machines. Dealer inquiries invited.

Trindl

Guaranteed 12 MONTHS IN CONTINUOUS OPERATION

TRINDL PRODUCTS Ltd., Dept. T4-C
1807 So. Clark St. Chicago 16, Ill.

***NEW* Vest Pocket .22 . . . . $12.95**

Brand new 1959 Model 6-shot German revolver that sells in the $28-34 range. A tight, accurate well-made piece. 2½" Bbl., 5" overall. Fires popular Winch., Rem., Western, Peters .22 short ammo. Features side gate loading, screw-in ejector rod. Has steel rifled barrel with blade front sight. Excel. for target, plinking or defense. 10-day money back guar. Only $12.95 COD's require $6.50 deposit. Leather holster $2.25. Shipped FOB, Los Angeles express charges collect. Send cash, check or M.O. Calif. res. add 4% state tax.

SEAPORT TRADERS, INC., Dept. MI-3
409 E. 12th St., Los Angeles 15, Calif.

pull the trigger...

spray paint

7 times faster than brushing!

Speedy Sprayer ONLY $32.00 less motor

Paints anything from a house to a toy. Saves its cost on the first major job! Speedy Sprayer does in minutes what brushing takes hours. Finish is smooth, flawless. Uses any ¼ h.p. motor with ½" shaft. *No. 780 Outfit*—10 ft. air hose, tire chuck, quart gun, less motor, only $32.00. Every workshop should have it. At leading stores.

Free! Write for "How To Spray" Booklet and folder.

W. R. BROWN CORPORATION
Specialists in Portable Paint Sprayers for Over 37 Years
2659 N. NORMANDY AVENUE, CHICAGO 35, ILL.

is a good, steady small car that will average about 30 mpg on regular gas.

The OPEL is a General Motors product made in Germany and powered by a four-cylinder, 90-cubic-inch engine that develops 56 hp. It has a top speed of better than 75 mph and in some distant parts of the world, such as South Africa, Opel owners wouldn't think of swapping their car for a Cadillac even if the fuel was free. They like their ruggedness and the fact they can be slammed over no-roads country. Opels seem to keep going under the most adverse conditions. The steering is excellent and fast and the roadability through bends is quite passable, even though it has the slightest inclination to plow occasionally. It will give better than 25 miles to a gallon and, with a price tag of just under $2,000, it's hard to beat.

Some other cars to think about might be the German BMW ISETTA 600, with its novel front and side doors and a rear-passenger seat, and the DATSUN, a Japanese import which sells for $1,800 and has a 37-hp, four-cylinder engine. I also like the British Sunbeam RAPIER, a quality sedan with a $2,500 price tag and a 73-hp, four-cylinder mill. The PEUGEOT 403 from France, with roomy interior and loaded with optional goodies such as sliding roof, windshield washer, clock and Michelin tires, is an excellent car at less than $2,200, though a little hard in the steering department.

In summing up, there's a lot more fun to be found in some of these imports than most American cars have offered for some time. There are other advantages, too, such as the ability to run happily on regular gas and to get anywhere up to 100 per cent more out of each gallon in doing so. I can think of a lot of reasons for buying any one of these cars, not the least of which is the fact that three or four years from now the chances are your 1959 purchase won't look

like an old straw hat on an ice wagon horse. Carmakers abroad don't plan deliberately to make this year's model look bad next year, a game Detroit has been successfully practicing for a long time. •

—*Tom McCahill*

Forget Something?

[*Continued from page* 71]

how do the quiz kids know so much?

Professional mind champs, of course, spend years memorizing master codes. But more revealing than this type of stunt are the memory exploits of amateurs.

Author James Thurber can "write" page after page of his books in his mind, then recall every word accurately as he dictates later. Arturo Toscanini knew the scores of innumerable compositions by heart. Napoleon was a walking encyclopedia about wars and battles. Truly remarkable—but not magic.

Thurber, for example, is almost blind. Therefore it was vitally important for him to develop a fantastic memory as a substitute for seeing. Toscanini has the same motivation—because of poor eyesight he devoted his energies to memorizing scores. Napoleon's immense knowledge of warfare stemmed from his fanatical interest in it.

And the amazing fact is that anyone of normal intelligence can duplicate the accomplishments of the quiz winners and even the stage memory whizzes.

Psychologists will even tell you how to go about it. Dr. Livingston Welch of Hunter College, N. Y., explains that "with a memory that is concentrating on only one thing, you can store up tremendous amounts of information. You can become fantastically knowledgeable, provided you are willing to sit down for years and read everything available on a subject."

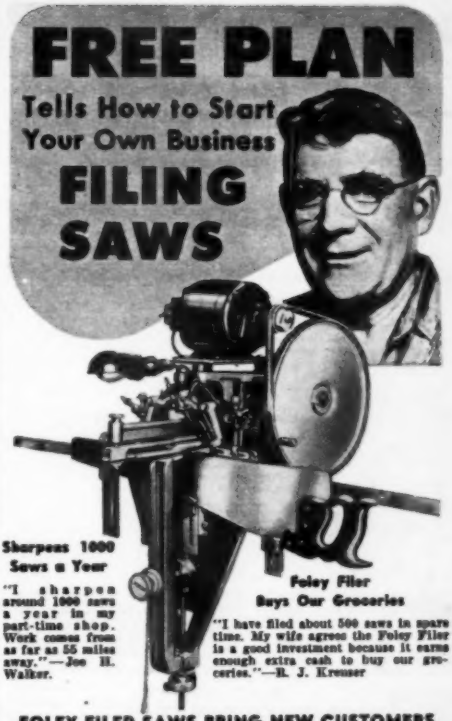
But without forcing or any apparent interest, the memory does an immense job all by itself. Scientists have long known that your memory is a vast storehouse of facts and impressions which have been piling up since your birth. Under hypnosis, persons have been sent back in time by "age regression," and remembered incidents long forgotten.

Dr. George A. Miller, conducting a study for the Office of Naval Research, discovered that the average person can re-

FREE PLAN

Tells How to Start Your Own Business

FILING SAWS



Sharpens 1000 Saws a Year

"I sharpen around 1000 saws a year in my part-time shop. Work comes from as far as 55 miles away."—Joe H. Walker.

Foley Filer Buys Our Groceries

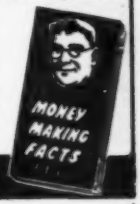
"I have filed about 500 saws in spare time. My wife agrees the Foley Filer is a good investment because it earns enough extra cash to buy our groceries."—H. J. Kreuser

FOLEY FILED SAWS BRING NEW CUSTOMERS

Here is a steady repeat CASH business that pays from $3 to $6 an hour, and you can start in your own basement or garage in your spare time. Every saw you sharpen with the machine accuracy of the Foley Saw Filer is an ad that brings more customers. J. C. Deibert wrote us: "Since I got my Foley Filer five years ago, I have averaged 4¼ saws each day over all this time." Howard Kuhns says: "We operate 2 Foley Filers, and our business averages about 500 saws per month. The count last year was 5,798 saws."

You can file all hand saws, also band and crosscut circular saws on the Foley Saw Filer. The adjustments are simple—there is no eyestrain—and you can start right away to turn out perfect cutting saws. "The first saw I sharpened with my Foley Saw Filer came out 100%. I think it is a marvel of perfection."—writes Clarence E. Parsons.

"MONEY MAKING FACTS" explains how you can get business from hardware stores, home owners, farmers, carpenters, schools, mills, factories, etc. Just think, with a modest investment, no overhead, no stock of goods to carry, you can start right in on a cash business that will help pay the rent, buy groceries, or a new car. Time Payments available; send coupon today for this practical money making plan. No salesman will call.



Send for **FREE BOOK**

FOLEY MFG. CO., 315-9 Foley Bldg., Minneapolis 18, Minn.

Send me free book "MONEY MAKING FACTS" and TIME PAYMENT PLAN.

Name .....

Address .....

there's money to be made

IN THE ORNAMENTAL CONCRETE BUSINESS

Manufacture—and sell—Ornamental Concrete Products yourself. You can make high profit, low cost products that are easily, simply produced.

A simple do-it-yourself with ALUMINUM MOLDS

CMC light-weight, high quality Aluminum Molds bring you ease of operation and make copyrighted concrete designs with a national record of sales success. Here is a do-it-yourself project that brings not only fun but money—Big Money.

How to turn CONCRETE into GOLD

Clear. Concise. Complete. This big, fully illustrated book gives complete, simple, easily followed "from Start-To-Finish" instructions, lists over 200 CMC Specialty Molds. Gives Valuable Sales and Production Tips. Get the complete story. Order your copy today.

Send $2.00 for your copy—

CMC CONCRETE MACHINERY COMPANY, INC.
DEPT. M HICKORY, NORTH CAROLINA

DRAINS cellars, cisterns, wash tubs; IRRIGATES - CIRCULATES - SPRAYS

1,001 uses. Stainless shaft. Won't rust or clog! Use ½ HP motor or larger. . . ¾ HP for up to 3,000 GPH; 450 GPH 80' high; or 1,800 GPH from 25' well. 1" inlet. ¾" outlet. Coupling included free.

Heavy Duty Ball-Bearing Pump. Up to 7,500 GPH. 1¼" inlet; $12.95 1" outlet. $7.95

Postpaid if cash with order. Also other sizes, types. MONEY BACK GUARANTEE

LABAWCO PUMPS, Belle Mead 30A, N. J.

GELLAR DRAINER "Low Boy" KIT 15½" high 1100 GPH. $12.95 (less motor)

"High Boy"—32" high. 3,000 GPH $15.95 (less motor)

IS THIS OFFER TOO GOOD TO BE TRUE?

We Pay All Freight For Your FREE Home Trial!

It's true. We pay all freight for your FREE home trial. Factory to you only $79.95. Handles big jobs. 100% ball bearing. Think of the fun you'll have and the money you'll save with your own workshop. Only $10 down delivers $79.95 Supershop prepaid to your home. Write for full details, color brochures, FREE home trial plan. Mail postcard now.

Power Tools Division
UNITED INDUSTRIES, Inc.
617 Yates Ave., Beloit, Wisc

member accurately only seven items on any list that is read to him. Ask someone to read the following list to you, then try to call off as many as possible from memory: apple, needle, glass, paint, girl, eraser, cup, bottle, door, sky, stair, moon, pen, crown, smile, chair, card, ear.

Got seven? You're average.

Dr. Miller offers this intriguing suggestion: Perhaps, since the human memory is limited to seven, this might explain why the number seven crops up so often—the seven wonders of the world, the seven notes of the musical scale, the seven seas, the seven deadly sins, the seven ages of man.

Incidentally, as far as memory goes, are you eye-minded or ear-minded? Knowing which is important. Eye-minded people learn best from books while the ear-minded can profit more from lectures. About 75 per cent of all people are eye-minded.

As they dig deeper into the mysteries of memory, the scientists keep exploding popular notions. Here are some more of the major myths about memory and the facts which have been discovered.

Myth: The older we get, the weaker our memories grow.

Fact: Dr. James D. Weinland, professor of business psychology at New York University, says: "An old person usually suffers little loss of memory for a subject in which he is still vitally interested." Dr. Weinland points out that Edison did his finest work after 70.

Myth: A person who learns things slowly retains what he absorbs a good deal longer than a quick study.

Fact: Not so. Dozens of tests have punctured this idea. Slow learners forget faster because they don't have the intense concentration of the fast students.

Myth: You can train your memory by constant memorizing.

Fact: Practice in memorizing does not effect a general improvement in ability to learn.

Myth: Men have better memories than women—or vice versa.

Fact: Once and for all, here's the scientific answer: Neither one is better!

Myth: We lose things because for some subconscious reason we want to get rid of them.

Fact: Memory experts are tossing this Freudian view out the window. Dr. Furst

claims that mental untidiness is responsible for most lost articles and proves it! Chronic losers of articles who attend his memory courses improve markedly. Dr. Furst doesn't psychoanalyze them; he simply improves their memories.

Little by little, science is peering deeper into the wonders of the remembering process. One psychologist at the University of California in Los Angeles imbedded tiny radio receiving sets into the brains of rats and stimulated the animals electrically by remote control. He discovered an amazing fact. The rats whose brains were stimulated at high frequencies remembered how to run a maze much better than rats pepped up at low frequencies.

Maybe some day, then, we'll be able to step up our own memories simply by increasing the frequency of the electrical impulses in our brains. Meanwhile, try a string around your finger! •

When answering advertisements please mention
MECHANIX ILLUSTRATED

The Olds 98

[*Continued from page* 86]

gutter. If you toss a cigarette out the window (as I occasionally do, though it's also thoroughly wrong) the chances are it won't go outboard but will land in this little trench and burn a hole in your paint job. So you don't hang your arm out the window and you don't smoke? Well, if you're driving in a light shower with your vent window open, this same dear little chrome strip will scoop you up a lovely lapfull of water and Bingo! you'd better be Sanforized. Anyhow, this is a *clean* feature. But if I bought one of these cars, my very first act would be to either flatten the outside chrome strip with a hammer or cut it off entirely.

My test car had a rear-view mirror that didn't show much more of the road behind than you'd see by looking through the exhaust pipe. As soon as two or three shirts and a beret were tossed into the trunk, the nose headed skyward and the mirror was practically useless. A final beef: I found the headlights as inadequate for high-

[*Continued on page* 180]

Big Volume and Big Profits are yours...with versatile

"Two-Way" Grinding Option on the New IDEAL 900 Lawnmower Sharpener

New heavy-duty IDEAL MODEL 900 sharpener precision grinds either by "hook" or "straight-line" method for EXTRA VOLUME and EXTRA PROFIT. Unit sharpens all kinds of reel-type mowers from the smallest edger to the largest fairway or power machine.

Outstanding Features Include:

- Gravity Feed
- Screw-type Adjustments
- ½ h.p. Motor
- 6-inch Grinding Wheel
- Includes Bed-knife Grinding Bar, Reconditioner and Tool Tray

THE FATE-ROOT-HEATH COMPANY
Dept. MI-3, Plymouth, Ohio

Write Today For Full Details On The
NEW IDEAL MODEL 900

LONG RANGE GERMAN BINOCULARS

REG. 4.98
NOW
2.69
PLUS TAX

Here's a super bargain from THORESEN—world's greatest importer of German binoculars! Thousands sold from coast to coast at 4.98—now reduced to 2.69 to win new customers. Made in Western Germany by a million-dollar factory.

7—SPECIAL FEATURES—7

German know-how and workmanship are reflected in this "77" model. It gives you long range plus wide field with 38 mm. objectives. Lightweight yet rugged for years of hard use. High luminosity even in moonlight. Smooth center focusing. Rich deluxe appearance.

SEEING IS BELIEVING

One look through this "77" will convince you! Enjoy one on 10-day trial. Use for travel, hunting, fishing, races, bird watching, all sports. Satisfaction guaranteed or money back. Send 2.69 plus 27c federal tax—total 2.96—for immediate delivery. COD's 50 cents more. Order today from reputable, friendly—

THORESEN, INC.
585 Water St., Dept. 10-C-160, New York 2, N. Y.

THE ORIGINAL PACKAGED
BOAT KITS

• World's Largest Line—New Fiberglass Hulls. Over 200 styles Boats-Kits, Formed-Hulls, Semi & Custom finished. All types: Prams, Cruisers, Racers, Inboards, Outboards. Easy to build. Professional results. Dealers-Agents inquire.

CREDIT TERMS

Send 25¢ for 3-Colored Catalogs: 68 pg. Kit-Catalog plus 20 pg. Hardware and 6 pg. Armor Glass books. (SPECIAL OFFER) All 3-colored CATALOGS plus "Boating Handbook"...all for $1.

★ BOAT PLANS, PATTERNS FRAME PACS

• Over 400 Plans-Patterns, Frame Pak Kits. Prams, Kayaks, Racers, Runabouts, Catamarans, Cruisers-In-Outboards (6' to 40') Wood, Plywood and Steel. Send 25¢ for 120 pg. Plan Catalog-Catalog plus "Boat Building Handbook"... Send $1.00.

CUSTOM • CRAFT Buffalo 7N, N. Y.

10" TILT/ARBOR SAW
BUILD-IT-YOURSELF
from GIL-BILT KITS-PLANS

Sturdy wood, steel, and aluminum construction. NEW DEPARTURE ball bearings. Capacity and performance of floor saws selling for $150.00 and up. Plans, all metal parts in kit with 10" comb. blade $27.40, less blade $23.95. F.O.B. St. Louis. Detail PLANS-PATTERNS only $1.00 postpaid.

Build-it-yourself 12" and 18" Bandsaw, 6" Belt Sander, Shaper. Simplified plans, build easily with hand tools only. Advertised and sold for 12 years, over 25,000 units in use. Money back guarantee. FREE CATALOG.

GILLIOM POWER TOOLS Dept. 60-C, Lambert Field St. Louis 21, Mo.

You can make BIG MONEY with these LOW COST WELDERS

180 amp. "HUSTLER"

For a surprisingly low investment you can start a well paying business, doing repairs, construction, metal fabrication, etc. These versatile, low cost Hobart welders are easy to use. Built-in features usually found on larger, more expensive models assure professional results, long life.

The 180 amp. "HUSTLER" is a complete welding package—including accessories. It welds, cuts, burns holes, hardsurfaces, and heats metal for bending and forming. Meets REA requirements.

The 200 amp. POWER/WELD furnishes DC current for welding—and simultaneously supplies 110/220 v. power for running lights, tools, motors, pumps, sprays, etc. Can also be used as an emergency power source to run brooders, milking machines, etc. Write today for complete details.

"POWER-WELD" ac power plus dc weld

HOBART BROTHERS CO., BOX SM-39, TROY, OHIO, Phone FE.2-1223

speed night cruising as a $2 bill for paying a dinner check at a New York night club on New Year's Eve.

One night while driving on the New Jersey Turnpike, where the road surface is as black as the bottom of a coal pit, the low beams gave me just about the same illumination I'd expect from my Zippo, held close to the windshield. The high beams seemed to annoy everyone, including a State Cop who drove alongside and suggested I get off the high beam. In all fairness I must say that the quad lights on my Imperial aren't very much better. In fact, I have yet to find a double-breasted headlight set-up on any car that even starts to compare with a good two-light rig.

So much for my beefs against the Olds 98—now for the goodies. The real test of this car came when we threw all our duffle in the trunk, loaded my wife Cynthia, trunk-tester Jim McMichael, our Labrador Boji and myself aboard and headed north. It was a pleasant 80° when we left Daytona late one afternoon. But that night in Georgia the thermometer dipped below 25 and the roads were sheet ice. I saw more cars off the road in the next 500 miles than I've seen in the last five years. Ice slicks over bridges and along the exposed stretches required all the roadability and balance of this Olds just to keep us heading toward that no-good Yankeeland. We had quite a few close calls as the natives, unused to such conditions, kept dropping down shoulders and into ditches like lemmings over a cliff. In one place we saw a huge double-decker bus crash through gas pumps and into a roadside store. At another spot there was a 12 car pile-up that looked like Halloween in a hamburger plant.

As we got further north we started to run into snow. My first stop was at Bel Haven, N. C., where I'd been goose-shooting with Axcson Smith and had left my own car before taking the boat south two weeks before. I found my Imperial serving as the filler in a snow sandwich and

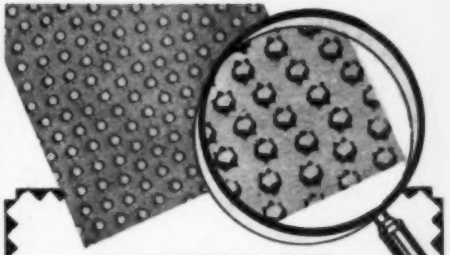
the temperature was nine above zero. Starting out again the next morning, this time with two cars, we worked our way up over blue roads to Rocky Mount and we felt like Hillary poking his nose through the South Pole. The thermometer was now down to four degrees.

I drove the Olds and Jim followed in the Imperial. I found the Olds' heating system excellent—if it hadn't been I'd have parked it on a siding and mailed it back to Lansing—but what impressed me even more was the sure-footedness of this car in extreme ice and through deep snow ruts. The 98 kept going even though dozens of other cars were getting hopelessly stuck in snow-banks. Heading north that day on US 301, we saw an ever-lengthening trail of abandoned automobiles. By an odd quirk of nature, as we reached Virginia the snow lightened, the roads cleared and by the time we got to Richmond there was very little snow on the ground and the roads were back to almost normal. This seemed to be a private southern blizzard, missing some of the states to the north almost completely. That night as I wheeled into my driveway I'd just finished nearly 700 miles of the toughest and most varied driving I'd ever been through in any single day—and I'd become quite fond of the '59 Oldsmobile 98. It's big without seeming to be big and as able as a full-sized gorilla in a saloon fight.

During my lengthy test of this car I discovered another good feature I don't believe I've ever mentioned in all my years of test-driving—and in mentioning it now I am not trying to be funny. It's this: the Olds 98 is one of the best backing-up cars I've ever driven. On one or two occasions I backed this 98 at full high speeds for over a quarter of a mile. There was no whipping or gyrating as some cars do when being backed. This is a real feature we test as a check on good balance. Due to the various characteristics of steering geometries, some cars are dangerous in reverse because of wander.

In summing up, the 1959 Olds 98 is a fine piece of transportation. It's a good road car and its power steering is finally equal to Chrysler's—the first other-make car I've ever driven about which I could make that statement. The trunk is large enough for a traveling troupe of bull fiddle players,

[*Continued on page* 182]

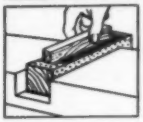


YOU'RE LOOKING AT A PIECE OF

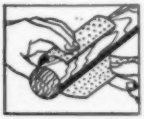
Dragon-Skin

Not one of St. George's souvenirs, but an amazing new cutting tool. A "steel sandpaper" that sands, rasps, smooths.

Use Less "Elbow Grease" when shaping, smoothing, rounding, or cutting slots, because Dragon-Skin cuts *fast*. New principle: steel sheet is punched to form special cutters—thousands of 'em—to *carve* away at the work. Cut is smooth and even. No rough sand "grits," no gouging.



Dragon-Skin Can't Clog like sandpaper, even when you're smoothing softest wood. Chips and dust fall right through the holes. Slap the sheet once and it's clear!



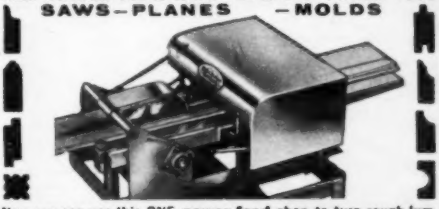
Makes Hundreds of Jobs Easier, and outlasts sandpaper by far. Shapes hard or soft woods, plastics, soft metals... removes paint... at home or at work... on hand or electric sanders. Cut with scissors and wrap around sticks or dowels to make special tools.

LOOK FOR THIS **Dragon Skin** DISPLAY AT YOUR Red Devil Dealer

75¢ complete with holder
25¢ for single sheets
Also available in full sheets and ⅓-sheets

Red Devil Tools.
Union, N. J., U.S.A.
World's Largest Manufacturer of Painters' and Glaziers' Tools

NEW BELSAW **MULTI-DUTY** POWER TOOL
SAWS—PLANES —MOLDS



Now you can use this ONE **power-feed** shop to turn rough lumber into moldings, trim, flooring, furniture...ALL popular patterns. RIP...PLANE...MOLD...separately or all at once with a one HP motor. Use 3 to 5 HP for high speed output. Fully Safe-guarded. Low Cost...You can own this power tool for only $30.00 down payment.
Write TODAY for Free Catalog
BELSAW POWER TOOLS, 939 Field Bldg., Kansas City 11, Mo.

TEST-RIDE the '59 TRIUMPH

FREE . . . WITHOUT OBLIGATION

Phone or write your nearest Triumph dealer *today*. He'll quickly arrange a free demonstration ride on a brand-new Triumph motorcycle. Once you sample its powerful, precisioned performance, you'll know why Triumph's World Record Line for '59 sets a new mark in motor-cycling pleasure.

Triumph outperforms anything on two wheels — tops in speed, maneuverability, handling ease and economy. Test-drive the '59 Triumph yourself!

Model shown is
BONNEVILLE T–120
40 cu. in. (650 c.c.) OHV

FREE Please send me the new 1959 full-color Triumph catalog showing your complete range of models with specifications.

☐ Check here if you wish name, address and telephone number of your nearest Triumph dealer sent by return mail. Dept. M

In the West: Johnson Motors, 267 W. Colorado St., Pasadena 1, Cal.
In the East: The Triumph Corp., Towson, Baltimore 4, Md.

Name.....Age.....
Street.....
City.....State.....
Telephone Number.....

IS SOCIAL SECURITY ENOUGH FOR YOU?

EARN EXTRA CASH SHARPENING LAWN MOWERS

Look around . . . many mowers need sharpening. You can earn up to $5.00/hr. It's easy too with MODERN'S versatile precision-built LAWN MOWER SHARPENER AND BED KNIFE GRINDER . . . the finest sharpening equipment you can use. Set up your operation in your garage or basement. Make it a full or part time operation. You make money from the start. Send for all details, they're free.

$275.00
F.O.B. Pasadena

MODERN MFG. CO.
160 N. Fair Oaks Ave. Dept. 20, Pasadena, Calif.

BOAT KITS

8'-18': 50 Models
$41.75 up;
Frt. Pd.
EASY MONTHLY PAYMENTS

FREE COLOR CATALOG

Cruisers, convertibles, runabouts, fishing. Easily assembled by anyone. FREE Catalog has natural color photos, complete details, Fiberglas, accessories hardware, paint. Write Today.

LUGER INDUSTRIES, INC., Dept. D-3
9200 Access Road, Minneapolis 20, Minnesota

the seats are comfortable and the leg room both front and rear is ample for a family of ostriches. This car is easy to drive even under the worst conditions, as sure-footed on glazed ice as an octopus wearing four pairs of track shoes. Toss all the virtues and faults of the Olds 98 into a bag and you come up with one of the best automobiles on the market today. •

How To Collect Coins

[*Continued from page* 92]

just as they came from the mint. Very fine coins are only slightly circulated. The fine ones may be slightly worn on the edges but the dates are easily read. A very good coin may be worn but legible. Don't waste time on coins not in "very good" condition. If the dates and outlines aren't plain on the coins, they're seldom worth more than face value.

After you've been collecting for a while and learned something about coins, you'll be able to trade with other collectors. From the coin catalogs you'll know current values of various coins. There is no end to the types of coins you can collect. For instance, you might want to build a collection of commemorative half dollars which coin dealers say are always a good investment and likely to increase in value. A commemorative coin is one minted in limited numbers to celebrate a special event.

Don't try to clean coins. You may reduce their value. You can store them in coin folders or in small individual coin envelopes which cost about 40 cents a hundred. Coins should never be stored loose so they rub against each other.

It's the rarity of a coin plus its condition that determines its value. Even a very old coin may be worth no more than face value. If you come across an 1865 two-cent piece it's worth $4.75 uncirculated and only 50 cents if classified as "good," even though it's nearly 100 years old. The reason? The government minted 13 million of them and collectors everywhere already have them. But you could get $115 for an uncirculated 1927 San Francisco minted nickel. If it is classed as "good" the price drops to $1.

You learn which coins are valuable by studying your subject in coin catalogs and dealers' lists. As much as $10,000 has been

[*Continued on page* 184]

CUT-TO-FIT HOMES CUT COSTS UP TO 40%

Save labor cost up to 100%, reducing completed home cost up to 40%. You can assemble any of 57 designs from easy-to-follow plans. No measuring or cutting . . . every piece precision machine pre-cut and marked. **BUY DIRECT FROM MILL.** Eliminate all between overhead, profit and labor costs. Nothing to plan or figure. Complete with all lumber, hardware, paint, nails, glass, roofing, etc. Sterling Home quality material throughout. Freight paid most areas. Write today. Send 25c for illustrated, color catalog, floor plans and details.

PRICED FROM $2150 UP

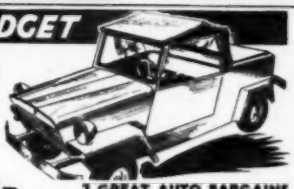
CHOICE OF 57 DESIGNS

FIVE EASY-PAYMENT PLANS

INTERNATIONAL MILL & TIMBER CO. Bay City, Michigan, DEPT. MI-39,

KING MIDGET

More power, beautiful styling. New Features. Still World's Lowest Priced Car. Drive it for 75c a week. Rider agents wanted. Earn your own car.



2 GREAT AUTO BARGAINS

King Midget Junior chassis, finely engineered, ready to run. Agents wanted. Send 25c for 32 page picture book, full details, dealers price on both cars. Or send $1 (refunded first order) for this and Service Manual, plus Repair Manual and 15 5x7 photos of car and factory.

MIDGET MOTORS CORPORATION, ATHENS 3, OHIO

CLOGGED SEWERS?

CLEANED INSTANTLY SAVES PLUMBING BILLS—

Anyone can trigger this new Plumbers Flushing Gun shooting air pressure on a solid shaft of water cleaning stubborn stoppages up to 200 ft. Toilets, Bathtubs, Sinks, Urinals, House-to-Street Sewers clogged with Grease, Rags, & Roots melt away when struck by hammer-like blow. Worth many times the Cost in Plumbing Bills. Tear Ad out now, write Address beside it for FREE BOOKLET, no obligation. No Agents will call, or phone Kildare 5-1702. MILLER SEWER ROD, DEPT. MI-3, 4642 N. Central Ave., Chicago 30, Ill.

Other "BUYS" Check Here
- ☐ ¼ Ton Utility Auto
- ☐ Riding Tractor & Mowers
- ☐ ROCKET BOAT
- ☐ Children's Autos

ESHELMAN TRACTORS

LOW AS $99

For Better Lawns and Gardens, Investigate Eshelman RIDING ROTARY MOWERS. Tillers. Tractors. Advertised in Good Housekeeping. Write for Free Literature. Dept. 39, ESHELMAN, Balto. 2, Md.

Riding Mower Illus. $149.00

WRITTEN GUARANTEE

NEW MAGIC RADIO WALKIE TALKIE!

YOUR OWN POCKET SIZE RADIO STATION! BROADCASTS TO ANY HOME OR CAR RADIO WITHOUT WIRES OR HOOKUPS! Wt. only 5 oz. Size only 1½"x2½"x 4½". Built-in telescoping antenna. Powerful Transistor—sensitive microphone, frequency setter, break-in switch! Runs for weeks on self-contained flashlight batteries. With this Radio Talkie you CAN TALK TO YOUR FRIENDS UP TO A BLOCK OR MORE AWAY!

Talk between two automobiles.—INSTANT OPERATION. Just push button to talk! No license needed. Uses inductive field magnetic radiation. Useful and real fun in a million ways! GUARANTEED TO WORK. 1 YEAR SERVICE GUARANTEE.

SEND ONLY $3.00 (cash, ck, mo) and pay postman $9.95 COD postage or send $12.95 for prepaid delivery. COMPLETE READY TO OPERATE with instructions and hundreds of ways and tricks for broadcasts thru any radio you desire. Get your NEW RADIO TALKIE NOW. Available only from:

WESTERN RADIO Dept. RMI-2 Kearney, Nebr.

STICK WITH LEPAGE'S

TRADEMARK

TAPE AND GLUE

Curious Coins!

ODD PAPER MONEY!

Worth $1 — But Yours

FREE!

to get names for our mailing list

SEND TODAY for this valuable packet of odd and curious coins, paper money — an exciting introduction to fastest growing hobby in the world! You'll find an African coin with a hole in the middle, a 50-pfennig coin from Germany, unusual money from Switzerland, Mexico, Austria, etc., Actual value at least $1—but yours FREE on this special offer!

JOIN THE FUN RIGHT AWAY

This is our way of showing how much fun others have collecting strange money — Money over 1500 years old — *Gambling* coins from old Siam — Tokens used for barter before Christ — and other exciting curios. All listed with other valuable offers for inspection. Get FREE packet of coins and money—plus $100,000 Confederate Money *bonus* —by sending coupon (with 10¢ for shipping) to: LITTLETON COIN CO., Dept. 9-MI-3,, Littleton, N. H.

ALSO FREE!

$100,000 in CONFEDERATE "MONEY"!

These lots-of-fun facsimiles are yours for promptness while the supply lasts.

LITTLETON COIN CO., Dept. 9-MI-3, Littleton, N. H.

Rush FREE packet of "Curious Coins and Currency" *plus* $100,000 in Confederate "money." I enclose 10¢ to help cover shipping. Also send lists of rare coins available and other offers for inspection. No obligation to buy.

Name.....

Address.....

City.....Zone...State.....

Works in seconds!

Loosens Rusted Bolts

nuts, screws, "frozen" parts!

LIQUID WRENCH

The super-penetrating rust solvent that quickly loosens rust and corrosion.

AT HARDWARE STORES, GARAGES SERVICE STATIONS, EVERYWHERE

RADIATOR SPECIALTY CO. Charlotte, N. C.

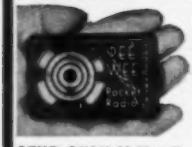
EARN GOOD MONEY IN SPARE OR FULL TIME.

UP TO $30 A DAY WITH A UNIVERSAL GRINDER

Have a business of your own in your garage or basement, sharpening lawn mowers. Be your own boss. Small investment. We furnish everything you need to start. Write Dept. L-39 today for complete details **FREE**

ROGERS MANUFACTURING CO. LINDSEY, OHIO

PEE WEE BATTERYLESS TUBELESS **"LIFETIME" RADIO**



GUARANTEED—FOR YOUR LIFE! AS LONG AS YOU OWN IT! NO TUBES, BATTERIES, TRANSISTORS OR ELECTRICAL PLUG-INS NEEDED! Will never run down or burn out! SMALLER THAN A PACK OF CIGARETTES! RECEIVES LOCAL RADIO STATIONS ANYTIME—ANYWHERE YOU GO! Easy thumb tuner, NO DANGLING EARPHONES. HAS BUILT-IN SPEAKER PHONE! Black gold plastic cabinet, semi-conductor wave detector. NOT IMPORTED. MADE AND GUARANTEED BY AMERICANS—You can always get service.

SEND ONLY $2.00 (bill, ck, mo) and pay postman $4.99 COD postage on arrival or send $6.99 for postpaid delivery. SENT COMPLETE READY TO LISTEN WITH LIFE GUARANTEE—NOTHING EXTRA TO BUY EVER! FREE LONG DISTANCE ANTENNA if you order now. Available only from: MIDWAY COMPANY Dept. WMI-3 KEARNEY, NEBR.

How To Collect Coins

[*Continued from page* 182]

offered for an 1804 uncirculated silver dollar. An 1861 Confederate silver half dollar is valued at $2,500 to $5,000—but only four of these were minted at New Orleans and all of them are accounted for. The record offer for a U. S. coin was made by a dealer to the U. S. Government, $35,000 for a $20 gold piece. The Government turned him down. One of the rarest of all coins, the 1873 CC dime (minted at Carson City, Nev.) would be worth at least $25,000 on the market.

Coin prices have been rising steadily in recent months. Last year an uncirculated Denver minted 1914 cent would have brought $140. Today it's worth about $170. In the same year an uncirculated 1913 San Francisco minted cent climbed from $6.50 to $20.

If you do come across some valuable coins your local bank will have current catalogs that give the values of coins. If you want to get in touch with a dealer the American Numismatic Association will supply a list. A word of warning—beware of shady quick-buck dealers. There are many bogus coins in circulation and dates and mint marks may be altered so cleverly that only experts can spot them.

Some collectors specialize and buy and save coins in a complete set of some denomination. Probably the most famous set is one owned by Louis Eliasberg, chairman of Finance Company of America. The famed Eliasberg collection contains one of every denomination of U. S. coins ever minted and is so valuable that Eliasberg has never set a price on it.

The largest coin dealer in the country is Stack's Coin Co. of New York. Others can be found in the yellow pages of the telephone book for most major cities. With the new boom in coins, their biggest trouble is buying coins rather than selling them.

"One of the hottest things in the business now," says Sol Kaplan, coin dealer of Cincinnati, "is Confederate money." This money, mostly notes, used to be worth nothing at all. But the old joke about paying off debts in Confederate money is going out of vogue because authentic Confederate notes are climbing in value.

Another type of money that is currently popular with coin collectors is proof sets which the government mint strikes each

year especially for collectors. These are glossy sets of the five coins, with a face value of 91 cents. The government sold them last year for $2.10 a set.

The truly big discoveries in rare coins are few. But coins worth up to 100 times their face value crop up steadily. For the coin collector who takes the time to learn his subject there can be many a lucky break along the way and not only can he get cash for cash, he can also make a profit on cash! •

(Editor's note: If you want more information about coin collecting, you'll find the following books helpful: A Guide Book of United States Coins by R. S. Yeoman, Whitman Publishing Co., Racine, Wis.; Fell's U. S. Coin Book, Frederick Fell, Inc., 386 Fourth Ave., New York, N. Y.; Coin Collecting by Joseph Coffin, Coward-McCann, Inc., 210 Madison Ave., New York, N. Y.)

The Art Of Box Busting

[*Continued from page* 101]

toughest sort of puzzle man has ever devised.

On the outside of a safe there is a knob and dial and inside the lock a set of metal disks or tumblers. The tumblers have a small slot cut out of them and revolve on a spindle controlled by the knob. When the correct combination is dialed, the slots fall in line and a metal lever drops into the opening and releases the bolt mechanism so the safe may be opened.

Good safes come with at least 100 numbers on the dial and have four tumblers—in which case there are some 100,000,000 combination possibilities. All you would have to do to open a four-tumbler lock is try one different combination per minute, 60 minutes an hour, 24 hours a day, 365 days a year—and in something like 200 years you'd get the right one.

Against that sort of odds it's easy to see why there just aren't any crooked safecrackers like the famed Jimmie Valentine. If by rare fortune a man had the touch, he couldn't afford to be a crook because he could earn himself a hefty five-figure annual income opening safes for banks, insurance companies, forgetful businessmen and private citizens.

Of course, the underworld abounds with Valentine tales but they are either faked

REPAIR
FOR YOUR B&D
TOOLS

For genuine B&D repairs check Yellow Pages under "Tools-Electric" for address of nearby Black & Decker

FACTORY SERVICE BRANCH

Free tool inspection when requested • Genuine B&D parts used • Factory-trained technicians • Standard B&D Guarantee at completion of recommended repairs • Fast service, reasonable cost, always.

Or write for address of nearest of 48 branches to: *The Black & Decker Mfg. Co.*, Dept. S5103, Towson 4, Md.

Black & Decker
QUALITY ELECTRIC TOOLS

ride the
CUSHMAN. Pacemaker

A ruggedly-built Cushman Scooter takes you anywhere, everywhere and—figuring operating costs, maintenance and depreciation—you really save. Cushman Husky 4-cycle engine delivers up to 100 miles per gallon at speeds of up to 50 miles per hour.

Ask your dealer for a FREE demonstration ride or write for new colorful booklet today.

Sold and serviced nationally . . .
Replacement parts immediately available.
Dealer inquiries invited.

CUSHMAN MOTORS
A subsidiary of Outboard Marine Corporation
915 No. 21st, Lincoln, Nebraska

MODEL CHANGEOVER SALE!
1958 MODEL—BELOW COST!

8" TILT ARBOR SAW

BLADE TILTS—TABLE REMAINS LEVEL

Heavy duty all cast iron and steel construction. Precision ground cast iron table. Price includes massive cast iron mitre gauge and patented motor drive that fits any motor. Cross cuts, rips, bevels, mitres, dadoes, cuts compound angles — everything expected of saws costing four times as much. Depth of cut adjustable; 0" to 2¼" — table always level. Send check or M.O. $2.00 deposits on C.O.D.'s.

SPECIAL BARGAIN — This saw is our 1958 model. Each saw is brand new — sent to you in factory sealed cartons. Sold and guaranteed direct from the factory to you at a fantastic bargain.

FREE 10 DAY TRIAL — MONEY BACK GUARANTEE

Try this famous saw 10 days. If you are not satisfied that it does the work of any tilt arbor saw, regardless of price, return for immediate money back refund.

Sent Express Collect.

We reserve right to refund money if stock is exhausted

AMERICAN MACHINE & TOOL CO.
ROYERSFORD 28, PA.

TOOLS WHOLESALE

$1.00 PUTS YOU IN BUSINESS

Start your own business, sell tools to your friends and neighbors, or buy tools for your own use and **SAVE MONEY $$$**

A MILLION DOLLAR INVENTORY AT YOUR FINGERTIPS. NO STOCK TO CARRY. ORDER AS YOU NEED IT.

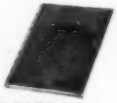
Send $1. for Tool Catalog today. **BUY AT WHOLESALE PRICES.** Extra $25.00 profit on your accumulated purchases. $1.00 is refunded if you are not 100% satisfied with our offer.

THOUSANDS!! of Nationally Advertised items of Hand Tools, Power Tools, Machinist Tools, Tool Chests, Paint Sprayers, Light Fixtures, Appliances, Guns, Gifts, Toys and other items too numerous to mention.

WE SHIP COAST TO COAST
Wholesale Discounts up to 50% OFF

SILVO HARDWARE CO., Dept. M1-3 107 Walnut St., Phila. 6, Pa.

BOTH FOR ONLY $2.00



REG. $2.75 VALUE

1 YEAR DELTAGRAM SUBSCRIPTION **DELTAGRAM YEARBOOK**

Get these famous DELTA publications now! 1 year subscription to the DELTAGRAM—the magazine that helps you get extra fun and profit from your home workshop. Also get a handsome, hardbound, fully illustrated 120 page DELTAGRAM YEARBOOK with nearly 50 projects and dozens of shop tips. Send check or money order for only $2.00 to: Delta Power Tool Div., Rockwell Manufacturing Co., 556C N. Lexington Ave., Pittsburgh 8, Pa.

or gimmicked. Herb Wilson, undoubtedly the champion safecracker of all time, having stolen $16,000,000 in a long career, confounded his gang once by twirling open a first-rate safe in something like ten seconds. What his confederates didn't know was that Wilson had spotted the combination written in crayon on top of the safe and went into a Valentine act strictly for laughs.

Far more popular with boxmen than manipulation for opening a safe is the principle of brute force. When a safe with a new, tough design and strength comes out, the real pros must take a crack at it and try to beat it.

And one way or another, every safe can be opened. For as Edwin Mosler, president of the Mosler Safe Co., the world's biggest manufacturer, candidly admits: "No safe is completely safe. Anything one man makes, another can break."

When combination locks were first introduced a century ago, crooks developed the "drag," a powerful screw that mashed the walls around the lock. When safemakers answered the drag by strengthening the walls, the boxmen devised the "jackscrew," an apparatus so rigged that by turning a screw it noiselessly forced the crack of a safe door with a succession of steel wedges of various thicknesses until the door popped from its hinges.

So the manufacturers took to making doors that shot bolts into the jamb of all four sides and devised dovetailed arrangements joining the door to the jamb to block the wedges. The crooks' response came in the form of an air pump that distributed a fine grade of gunpowder all around the crack of the door. The air pump was placed at the bottom of the door and a funnel of powder was placed at the top and the rest of the crack puttied up. When the pump sucked air from the safe and created a vacuum, the powder was sucked around the crack. A pound of powder set off by a cap did the trick.

A top safecracker, Langdon Moore, developed his own pete-busting tools consisting of a back brace with adjustable extension legs. The brace was bolted to the floor, adjusted to dial height, and a crank with a one-quarter inch diamond-pointed drill was then fitted into a headpiece at the top of the legs. The drill could bite through two inches of solid chilled steel and lock casing in about 30 minutes.

With a small bellows, a charge of powder was blown through the hole into the lock, a short fuse was attached and lighted. A dull boom swung open the door.

One of the toughest safes to crack is nicknamed the "cannonball." The money compartment is a large egg-shaped safe attached to a lower stand of solid steel some four feet thick. The door is made of 12 steel plates each two inches thick and securely bolted to another door. The door doesn't open like an ordinary safe door but screws open when the wheel attachment is turned in connection with the combination. The way the door is constructed, it is impossible to penetrate the first door to put in any explosives.

The cannonball stumped safecrackers for years until masterful Herb Wilson thought back to his Boer War days in South Africa when soldiers used to break open large ostrich eggs found on the veldt. "With a small hatchet we'd crack the shell on the large end, going completely around the egg. Then one last blow with the hatchet, a little pressure with one hand while the other seized the opposite end of the egg, and the two pieces came apart as the contents went into the frying pan."

Wilson began seeing the cannonball as a great big ostrich egg. With a specially designed oxygen-acetylene torch Wilson cut a one-inch groove all the way around the big end of his "egg," then poured cold water on the heated metal. Next he set the edge of a specially-made hatchet into the burned groove and had an accomplice bang it with an eight-pound copper hammer. Copper against steel makes very little noise. When they had circled the groove, Wilson took aim with the hatchet and hit the groove at the top of the safe one sharp blow. And, just like an ostrich egg, the big end of the cannonball safe gave way and crashed to the floor at the safecrackers' feet. Wilson's ingenuity resulted in a cool $170,000 haul.

Today there are four basic ways to handle the average safe. Since few modern safecrackers are really expert at their trade, only one is very effective. The other three are too risky. The trouble with burning is the danger of destroying the paper money in the safe.

"Punching" is another method that is fading from use. In this technique the burglar bats off the knob and tries to slap the spindle through the lock, hoping to re-

Build this smart vacation cabin for $1,000 with easy-to-use **FIR PLYWOOD**

PLANS ONLY **25¢**

. . . include six 14" x 20" sheets. Fully detailed with materials list, illustrated step-by-step instructions

Here's a good looking, low-cost "second home" for beach or mountains that combines real livability with strong, money-saving fir plywood construction. Cabin is 400 sq. ft.; includes big living area, bedroom, kitchen and bath—plus roomy 8' x 20' "second floor" sleeping deck. Big plywood panels simplify construction—even for amateurs. Parts can be prebuilt in your garage or basement to speed work on site. Materials cost about $1,000, not including fireplace.

ORDER CABIN PLAN NO. 2. 25c per set postpaid. Or send 10c for idea-packed 12-page color illustrated Cabin Plans Catalog. (Offer good USA only)

DOUGLAS FIR PLYWOOD ASSOCIATION, Dept. 12, Tacoma, Wash.

UNUSUAL BARGAINS

CLOSE OUT! MECHANICAL DRAWING SET

Regular Price $18.00—Our Price Only $6.00 Postpaid

American mfr. couldn't compete with foreign imports—thus you get a terrific bargain, even far below import prices. 10 handsome pieces in velvet-lined case. Nickel plated brass—precision American-made. We guarantee you'll be satisfied or money refunded.

Stock No. 50,280-B .....$6.00 Postpaid

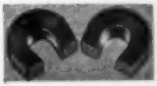
Quantity Price: 5 Sets for $5.50 each Postpaid
10 Sets for $5.00 each Postpaid

REPLICA GRATING—LOW, LOW COST

It's here—after decades of effort! Replica Grating—on film—at very low price. Breaks up white light into full spectrum colors. An exciting display. 13,400 lines per inch. Diffraction Grating has been used to answer more questions about the structure of the material world and the universe than any other single device. Use is for making spectroscopes, for experiments, as a fascinating novelty. First time available such large size—so cheaply. Comes in clear plastic protector.

Stock No. 40,267-B—piece 8" x 11" .....$1.50 pstpd.
Stock No. 50,160-B—piece 8" x 6 ft.....$5.95 pstpd.

HORSE SHOE MAGNETS



Set of 2—approx. 1½ ozs. each
Stock No. 40,275-B (set of 2) $1.00 pstpd.

Giant Size—5 lbs. each, will lift over 100 lbs.!
Stock No. 70,183-B .....$8.50 each pstpd.

Super Giant—15¾ lbs., will lift over 250 lbs.!
Stock No. 85,008-B .....$22.50 each F.O.B. Barrington, N. J.

WRITE FOR FREE CATALOG "B"

Complete Line of Astronomical Telescope Parts and Assembled Telescopes. Also huge selection of lenses, prisms, war surplus optical instruments, parts and accessories. Telescopes, microscopes, Hand Spectroscopes, Sniperscopes, binoculars, etc. Request Catalog "B".

EDMUND SCIENTIFIC CO., BARRINGTON, N. J.

There's nothing like a VESPA

For the happiest time of your life. The fun way to go places... and save money too.

See your local Vespa Dealer. He'll be happy to take the entire family out for a thrilling test ride.

For an illustrated brochure showing all three Vespa models send ten cents in coin to cover handling and mailing to:

Vespa Distributing Corporation
3 East 54th Street · New York 22, New York

ELECTRIC WELD - BRAZE & CUT

REPAIR MOST EVERYTHING MADE OF METAL

Home Appliances, Auto Parts, Farm-garden equipment, toys. Make and repair playground equipment, lawn chairs, tables, ornamental iron work, gates, wagons, etc. Solder, heat, bend, and straighten with terrific heat from arc torch. Cut and weld up to ¼" steel plate. A million uses for Home, auto, farm, inventors, factories, etc. Works from any home 110 volt plug-in. Complete with dark welders mask, arc torch, supply of carbon welding and brazing rods. Complete Welding Instruction Book. Portable—efficient—1 year guarantee.

SEND ONLY $3.00 (cash, ck, mo) and pay postman only $9.95 plus COD postage on arrival or send $12.95 and we will send postpaid. Ideal gift for mechanically minded home owners, relatives, friends. Order now for early delivery. Available only from:

MIDWAY WELDER Dept. 0361-3 KEARNEY, NEBR.

GEARS

In Stock - Immediate Delivery

Gears, speed reducers, sprockets, thrust bearings, flexible couplings, pulleys, etc. A complete line is carried in our Chicago stock. Can also quote on special gears of any kind. Send in your blueprints and inquiries.

Send for Complete Catalog No. 15

CHICAGO GEAR WORKS
440-50 N. Oakley Blvd., CHICAGO 12, ILL.

ANNOUNCING NI-BRAL UNBREAKABLE PROPELLERS

MICHIGAN'S new NI-BRAL props, for large motors only, may be nicked but virtually never bent or broken... carry 5 year guarantee against breakages... eliminate repair lay-ups. Send card for FREE 1959 catalog giving propeller recommendations for motors of 5 HP and larger which by actual test provide far MORE SPEED, BETTER SKIING or LOAD CARRYING than original prop ... other helpful data. MICHIGAN WHEEL CO., Grand Rapids 2, Mich., Dept. M-3

lease the boltwork. Safes built in recent years can't be punched because of special relocking devices.

"Blowing" a safe is a routine far more talked about than actually practiced. Yeggs invariably blow themselves apart or shake up alarms in other buildings by using too much soup (nitroglycerine).

The most popular way of box busting today is the "rip" technique in which a small hole is drilled in the upper left-hand corner of the safe door and the pointed end of a sectional jimmy inserted so the door can be pried open by leverage. Naturally such a simple method generally works on safes considered only fire-resistant rather than burglar-proof.

Yeggs generally will go after only a fire-resistant safe. When they come up against a first-rate burglar-resistant job they just pick up their tools and leave. Not so with a real safecracker. He'll work and sweat and slave over it and if he can't open it he'll lie awake nights thinking about it until he comes up with a solution.

Box busting, like any other job, has its occupational hazards. Recently the Mosler Safe Co., which put out a booklet titled What You Should Know About Safes, got a request from a man who listed his address as TSPF, Snipe, Texas. TSPF stood for Texas State Prison Farm.

In case you're tempted to try some of the methods mentioned in this article, I should tell you that they simply won't work on the new safes. There are certain methods that *might* succeed but you won't read about them here. We don't want MI readers signing letters with numbers! •

What's New In Pills

[*Continued from page* 72]

Father.") Some cathartics and many patent medicines are still put out in pill form but most modern pills are really tablets. Tablets are made of dry powdery mixtures. Besides the medicine, the powder usually contains a lubricant, a filler and a disintegrator to help the tablet dissolve. The dry mixture is compressed into tablets by machine.

Pills were used as far back as 1500 B.C. The Greeks called them *katapotium*—something to be swallowed. *Pilula* (from *pila*, a ball) were popular with Romans for coughs and constipation. Health-seekers through the ages have swallowed some

odd pills. During the 16th and 18th centuries silver and gold-coated pellets were in great vogue. The "Everlasting Pill" was popular as late as 1850. Made of metallic antimony, it was reputed to purge as often as swallowed.

The Grand Balsamick and Health-Procuring and Preserving Pill stopped headaches, strengthened sight, improved the appetite and "ended the dullness that attends hard drinking." The Never-Failing Pills, popular in the 1860's, were guaranteed to cure everything but broken bones.

A famous English quack, James Morrison, compounded pills of oatmeal and aloe (a purgative). He brought two barrels full to London, opened a College of Health and speedily amassed a fortune. Another fraud, Joshua Ward, fed his homemade pills to the ailing King George II. When the king recovered in spite of the treatment—Ward went on to fame and riches.

Some of the quacks' pills were harmless placebos, or fakes, made of milk sugar. (Others sent the patients to an early grave.) Pure placebos, incidentally, are not much used these days; physicians are more likely to prescribe vitamins for chronic pill swallowers. Some manufacturers use placebos when they test a new drug; half the subjects are given the bona fide tablet, the other half placebos that look identical. That way they can tell the real results from the imaginary ones. Placebo means "I shall please"—meaning I shall please the pill-crazy patient without hurting him.

Medieval Arab physicians silvered or gilded pills to conceal the bad taste but pills were generally bitter until the French began sugar-coating them in the 1830's. Today many tablets come candy-coated or not to suit the self-indulgent or Spartan user. "Candy aspirins" for children are sweet flavored—which makes them dangerous to leave where kids can reach them. (They may gulp too many.)

Until the last century, pill-making was a simple process. The pill-roller rolled the doughy mass into long, thin "pipes," cut them into small pieces and rolled these between thumb and forefinger.

Nowadays rotary machines compress the "cores" of tablets, deposit them on a bed of dry coating material, then compress additional material around the core. A modern double rotary machine can spew

[*Continued on page* 191]

REPLACE YOUR WORN-OUT WOODEN HATCHWAY...

with an all-steel BILCO basement door

. . . and your basement entrance will be weathertight, good-looking — for a lifetime. A spring-balanced Bilco door floats open at a touch . . . locks securely . . . costs so little. And you can install it yourself — in just a few hours!

Bilco

AMERICA'S FINEST BASEMENT DOOR

The Bilco Co., Dept. R-83
New Haven 5, Conn.
Please send me your free illustrated folder and name of local dealer.

NAME _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____

$500 in 4 months spare time

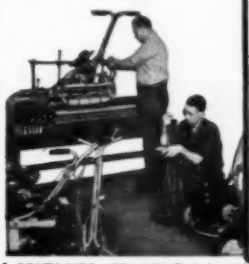
IS WHAT I MADE WITH
the FOLEY LAWN MOWER SHARPENER

"No one can go wrong with the Foley machine"—V. J. Patterson wrote us. Get in this CASH business where 99c of every dollar is YOUR profit! The Foley Lawn Mower Sharpener handles up to 3 or 4 mowers per hour. Hand mowers run $2.00 to $3.00—power mowers $5.00 to $8.00.

FREE PLAN shows how to start. Foley prices are low—easy payments available. Send coupon today—no salesman will call.

"In my home town of 5,000 I paid for the Foley 4 or 5 times over the first season. I also put a $1035 oil furnace in my new home." —B. Mathews.

"We sharpened nearly 1000 mowers our first season and gained a reputation for the best work."—J. W. Kemper.



Sharpen Rotary Mower Blades
with the Foley Grinder, also circular saws, ice skates, scissors, planer knives, all sharp edged tools.

FOLEY MFG. CO., 306-9 Foley Bldg., Minneapolis 18, Minn.
Send FREE PLAN on lawn mower business and Special Combination Offer.

Name _____
Address _____

OPTICAL BARGAINS

WAR SURPLUS AMERICAN-MADE
7 x 50 BINOCULARS

Big savings! Brand new! Crystal clear viewing—7 power. Every optical element is coated. An excellent night glass—the size recommended for satellite viewing. Individual eye focus. Exit pupil 7mm. Approx. field at 1,000 yds. is 376 ft. Carrying case included. American 7 x 50's normally cost $195. Our war surplus price saves you real money.
Stock No. 1583-B .....only $55.00 pstpd. (Tax included)

SALE! TERRIFIC WAR SURPLUS BARGAIN!
AERIAL CAMERA LENSES

Gov't. Cost $1216—Now Low as $39.50 Used Made by B & L and E.K.—24" F.L. f/6, in 23" long Lens Cone. Use as long range, Big Bertha Telephoto lens—for Richest field (wide field, low power) telescope, etc. Lenses are 4" dia.—precision 4-element type, Aero Tessar and Aero Ektar. Easily removed. Diaphragm (f/6 to f/22) is included. Opens approx. 1" to 3½". Lens and cone—wt. 25 lbs. Sturdy carrying trunk—wt. 28 lbs.

Stock No. 85,050-B 24", used. Price $39.50 f.o.b. Utah
Stock No. 85,060-B 24", new. Price $59.50 f.o.b. Utah

ERECT IMAGE LOW POWER MICROSCOPE
5X, 10X, 20X
$80.00 Value — Only $19.95

Extremely sturdy with rack and pinion focusing, color corrected optics, turntable microscope body for inclined viewing, three different powers, long working distance under objectives, sufficient eye relief for easy viewing. Made from war surplus optical instrument so that you actually get $80.00 of value. Weighs 4 lbs., 13" high. 10-DAY FREE TRIAL! Accessory objectives available for powers of 15X, 30X, 40X.
Stock No. 70,172-B .....$19.95 Postpaid

WRITE FOR FREE CATALOG "B"

Complete Line of Astronomical Telescope Parts and Assembled Telescopes. Also huge selection of lenses, prisms, war surplus optical instruments, parts and accessories, Telescopes, microscopes, Hand Spectroscopes, Spiperscopes, binoculars, etc. Request Catalog "B"!

ORDER BY STOCK NUMBER. SEND CHECK OR MONEY ORDER. SATISFACTION GUARANTEED
EDMUND SCIENTIFIC CO., BARRINGTON, N. J.

EXPLORE SPACE!

We offer a complete line of reflector telescopes, optics, parts, and accessories for the amateur astronomer and star gazer . . . assembled and do-it-yourself telescope kits . . . optical kits, prisms, binoculars, microscopes, magnifiers, filters . . . free catalog.

BUY DIRECT FROM MANUFACTURER AND SAVE!

ESCO PRODUCTS CO., Oak Ridge, N. J.

75 POWER TELESCOPE 25X-45X-75X $3.98

NEW 3 in one telescopes. 3 variable 25X-45X-75X magnification. Brass bound. 25 power for ultra bright images. 45 & 75 power for long range. Guaranteed to bring distant stars, moons, objects, sports 75 times closer. Most powerful scope sold anywhere near this amazing low price. American made, 5 sections. Opens 36", closes 1 ft.; contains 4 ground & polished lenses. Can also be used as powerful compound microscope. Mass production enables us to offer telescope complete at $3.98 postpaid. Money back guarantee.
CRITERION CO., Dept. BML-71 331 Church St., Hartford, Conn.

KIT BOATS

Boat Plans Patterns Frame Kits

KIT CATALOGS—Over 50 Models—Pre-assembled. Runabouts, Cruisers, Fishing (8' to 19'). Anyone can assemble. Complete Marine Accessories, Fiberglass plastics, trailers, paint, etc. Also CATALOG on 50 Modern Plans and Patterns. Prefab Frame Kits—All types best for the amateur builder.

SAVE 2/3
FREE FREIGHT
CREDIT TERMS
Tonawanda 1N, N.Y.
SEND 10¢ FOR 3 COLORFUL CATALOGS—NOW
Craig Craft Name _____ City _____ Address _____ State _____

Telescope Maker's Page

[*Continued from page* 149]

Flat Black. **A deep flat black for painting the inside of your telescope tube can be made with "coach black" pigment and turpentine. The black pigment comes in a tube or a small can. Buy a small amount, four ounces will be plenty, from any paint store. Mix it with the turps until you get a creamy mixture and apply it to the inside of your tube with a soft brush.**

* * *

Scratches. Scratches, like taxes are always with us. After polishing has started they are practically impossible to remove. However, they can be *prevented.* First, by making sure that there is no contamination between the grades of carborundum. Secondly, by a change of clothing. No, you don't have to wear full dress clothes to grind and polish a mirror, but neither should you wear coveralls. A short-sleeved shirt is best. Remove your shirt and start off with a clean one, and slacks too, when starting in with the next grade of grit. These pestiferous grains of carbo, grit, or whatever you want to call them, have among other qualities a nasty habit of lodging in the folds of your clothes and falling out at the most inopportune times to scratch your mirror. Fastidiousness avoids scratches. The scratch will not materially affect the definition of your mirror but it will bother your conscience.

TELESCOPE MAKERS

EVERYTHING FOR THE AMATEUR
BUILD YOUR OWN TELESCOPE—EXPLORE SPACE

Thousands of our customers with no special training have built powerful precision telescopes with our quality supplies, instructions, & guidance. So can you. MIRROR MAKING KITS. Eyepieces, etc.
COMPLETE INSTRUCTIONS 10¢—FREE CATALOG
PRECISION OPTICAL SUPPLY CO.
1001-M EAST 163rd ST., NEW YORK 59, NEW YORK

TRANSFORMER WELDER 24.95 FOR QUICK

Complete with everything. Ready to plug in. 110 volts AC. Draws 15-30 Amps. Produces 75 Amps, 5 heats. Welds metal from 1/16" to ¼" using 1/16" to 3/32" standard rods. Guaranteed unconditionally. 10-day trial. $5. deposit on C.O.D. Does everything welders costing up to $75. do. ⅛" welder $8.95 plus 50¢ for postage.
ESSAY MFG. CO., INC., Dept. 101, Quincy 69, Mass.

TELESCOPES

Reflectors-Refractors
Complete—ready for use with or without tripods
$3.98 to $475 Up
Also REFLECTOR TELESCOPE KITS
All the necessary parts to build own reflector scopes, parabolic mirrors, achromatic eyepieces, Tripods, all other accessories. Free illustrated literature on request. Dept. ML3.
Criterion Co., 331 Church St., Hartford, Conn.

What's New In Pills

[*Continued from page* 189]

out tablets at the rate of a million a day.

Modern "fast-acting" tablets usually contain starch, which swells when moistened and "explodes" the tablet. "Sustained action" tablets have several layers, each with a hard-to-dissolve coating. An "enteric-coated" tablet will not dissolve in the stomach but only in the intestine; this coating is used with drugs that produce nausea when they hit the stomach, or with drugs that are destroyed by the stomach acids. Some tablets contain different drugs that clash with each other; for instance, some drugs work well in an acid environment, others in alkaline. Tablet makers solve the problem by putting one set of compatible elements in the core, the other in the coating.

One CIBA tablet is really slow-dissolving. Six to a dozen implanted in the skin of a sufferer from Addison's disease will last from nine to 12 months.

Tablets come in different colors so you can tell your vitamins from your antihistimines, but also to please the eye. People like taking colored pills better than dull-looking ones. Favorite pill color is red. Pills (all right—*tablets*) are usually round to make them easier to swallow but some are hexagonal, octagonal or beveled for identification. Half-inch tablets are the largest made for human beings; boluses for horses are the size of walnuts. The smallest tablets for people are about 3/32 inches in diameter.

Most reducing pills are merely a waste of money, being made of harmless stuff like skim milk and lemon juice, but a number contain drugs that can bring on high blood pressure, cerebral hemorrhage, heart attacks and abortion.

Before a pill can be made it must undergo a stiff examination by the Pure Food and Drug Administration. But even USP tablets can be harmful if given to the wrong patient or in the wrong doses. Your best bet is to take your tablets Exactly As Prescribed. Your doctor should be in charge of all your pill-swallowing. If he says Before Meals that doesn't mean After. And don't pass them around the family, even if you "all have the same bug." Taking the wrong pill seldom kills anyone but it often makes him wish he were dead. •

CHAIR WOBBLY?

Tighten all loose objects with handy Plastic Wood. Won't chip or crack. Ask for it by name.

For surest results always use GENUINE

PLASTIC WOOD

Handles like putty—hardens into wood!

Get New 132 Page Catalog of WOOD AND WOODWORKING MATERIALS

WORLD'S LARGEST SELECTION—Lowest Prices! Your buying guide for finest kiln dried domestic and rare imported woods, inlays, handles, matched plywood, moldings, commands, etc. Largest selection of tools and hard-to-find hardware. Packed with new new patterns, projects, wood facts and money making ideas. Enclose 25c (refunded on first order) to help pay mailing and handling costs. Write today to CRAFTSMAN WOOD SERVICE COMPANY 2729 S. Mary Street, Dept. G-3, Chicago 8, Ill.

FREE! LAFAYETTE'S 1959 CATALOG

260 GIANT-SIZED PAGES

CONTAINS HUNDREDS OF EXCLUSIVE LAFAYETTE ITEMS NOT IN ANY OTHER CATALOG OR AVAILABLE FROM ANY OTHER SOURCE - SEND FOR YOUR COPY NOW!

Everything in Electronics

See the newest and finest in Stereo Tuners, Amplifiers, Cartridges and Music Systems

• TAPE RECORDERS • PUBLIC ADDRESS SYSTEMS • AMATEUR EQUIPMENT • INDUSTRIAL SUPPLIES • RADIO & TV TUBES AND PARTS • INSTRUMENTS • TELESCOPES, BINOCULARS, MICROSCOPES & CAMERAS

The Complete Catalog Featuring The Best Values Obtainable

LEADERS IN HI-FI

OUR 38th YEAR

The most complete electronic supply catalog crammed full of everything electronic at our customary down-to-earth money-saving prices.

The largest selection of hi-fi components and systems; greatest savings on Lafayette endorsed "best-buy" complete systems.

EASY PAY TERMS AVAILABLE — 10% DOWN — UP TO 18 MONTHS TO PAY

CUT OUT AND PASTE ON POST CARD

Lafayette Radio

P.O. Box 511
JAMAICA 31, N.Y.
DEPT. TC9

☐ Send FREE LAFAYETTE Catalog 590

Name.....

Address.....

City.....Zone.....State.....

BIG JOB BOOM FORECAST!

Can You Get Ready in Time?

Right now job opportunities are tight all along the line. Economists now predict a period of mild ups and downs. Look for the "big break" to come in the next three years, they say. That's when good jobs will open up as never before. And men who are preparing themselves *now* will ride the crest of the boom.

DARK OUTLOOK FOR UNSKILLED WORKERS

Those with little or no training will find the going tough. Fewer openings. More competition for existing jobs. The tide is against the unskilled worker. It's getting stronger. Nor will the boom help. The new opportunities will go first to the skilled, next to the semi-skilled.

BIGGEST DEMAND IN THESE FIELDS

What's ahead? According to the best estimates, here are the industries due for the sharpest employment rise: Heavy transportation equipment. Mechanical, electrical, chemical, aeronautical and highway engineering. Industrial electronics. All metals. Business services. Natural gas and oil. Paper products. On the other end of the scale, employment may lag in agriculture and leather. Check the trends in *your* field. Are you prepared to switch, if necessary?

GETTING YOURSELF READY—NOW

All the experts agree: Education, skill, specialized training will net the greatest rewards in the coming boom. The time you spend improving yourself is perhaps the wisest investment you can make *right now*. Your future success and happiness could hinge on your mastering a certain subject or acquiring a special skill. But there are obstacles. You may have a family to support. Or a job to hold down. You may feel you're too old to learn.

HOW I.C.S. CAN HELP YOU

For the man who can take his training hard and fast—without time off from his job or heavy expense—I.C.S. offers real advantages. A total of 259 courses to choose from (see partial list below). A spare-time method that lets you progress as rapidly as you're able. Up-to-date, authoritative text material. Thorough, personalized instruction. Industry-recognized diploma to graduates. I.C.S. is the oldest and largest school accredited by the Accrediting Commission of the National Home Study Council. Its long list of successful graduates reads like "Who's Who."

Can you be ready for the next job boom? You can if you act quickly. Your first step: mark and mail the coupon below. What you do right this minute may determine how you make out in the coming boom!

THREE FREE BOOKS TELL HOW TO MEET NEXT JOB BOOM

Get the details on the fields that offer the best jobs in the immediate future. Get these three valuable books free—(1) "How to Succeed"—pocket-size guide to advancement, (2) Sample lesson (Math.) demonstrating the I.C.S. method, (3) Opportunity catalog on the subject you check in the coupon. Just mail the coupon.

For Real Job Security—Get an I. C. S. Diploma! **I. C. S., Scranton 15, Penna.**

Accredited Member, National Home Study Council

INTERNATIONAL CORRESPONDENCE SCHOOLS

ICS

BOX 873828, SCRANTON 15, PENNA. (Partial list of 259 courses)

Without cost or obligation, send me "HOW to SUCCEED" and the opportunity booklet about the field BEFORE which I have marked X (plus sample lesson):

ARCHITECTURE and BUILDING CONSTRUCTION
- ☐ Air Conditioning
- ☐ Architecture
- ☐ Arch. Drawing and Designing
- ☐ Building Contractor
- ☐ Building Estimator
- ☐ Carpenter Builder
- ☐ Carpentry and Millwork
- ☐ Carpenter Foreman
- ☐ Heating
- ☐ Painting Contractor
- ☐ Plumbing
- ☐ Reading Arch. Blueprints

ART
- ☐ Commercial Art
- ☐ Magazine Illus.
- ☐ Show Card and Sign Lettering
- ☐ Sketching and Painting

AUTOMOTIVE
- ☐ Automobile
- ☐ Auto Body Rebuilding and Refinishing
- ☐ Auto Engine Tuneup
- ☐ Auto Technician

AVIATION
- ☐ Aero-Engineering Technology
- ☐ Aircraft & Engine Mechanic

BUSINESS
- ☐ Accounting
- ☐ Advertising
- ☐ Business Administration
- ☐ Business Management
- ☐ Cost Accounting
- ☐ Creative Salesmanship
- ☐ Managing a Small Business
- ☐ Professional Secretary
- ☐ Public Accounting
- ☐ Purchasing Agent
- ☐ Salesmanship
- ☐ Salesmanship and Management
- ☐ Traffic Management

CHEMICAL
- ☐ Analytical Chemistry
- ☐ Chemical Engineering
- ☐ Chem. Lab. Technician
- ☐ Elements of Nuclear Energy
- ☐ General Chemistry
- ☐ Natural Gas Prod. and Trans.
- ☐ Petroleum Prod. and Engr.
- ☐ Professional Engineer (Chem)
- ☐ Pulp and Paper Making

CIVIL ENGINEERING
- ☐ Civil Engineering
- ☐ Construction Engineering
- ☐ Highway Engineering
- ☐ Professional Engineer (Civil)
- ☐ Reading Struc. Blueprints
- ☐ Sanitary Engineer
- ☐ Structural Engineering
- ☐ Surveying and Mapping

DRAFTING
- ☐ Aircraft Drafting
- ☐ Architectural Drafting
- ☐ Drafting & Machine Design
- ☐ Electrical Drafting
- ☐ Mechanical Drafting
- ☐ Sheet Metal Drafting
- ☐ Structural Drafting

ELECTRICAL
- ☐ Electrical Engineering
- ☐ Elec. Engr. Technician
- ☐ Elec. Light and Power
- ☐ Practical Electrician
- ☐ Practical Lineman
- ☐ Professional Engineer (Elec)

HIGH SCHOOL
- ☐ High School Diploma
- ☐ Good English
- ☐ High School Mathematics
- ☐ High School Science
- ☐ Short Story Writing

LEADERSHIP
- ☐ Industrial Foremanship
- ☐ Industrial Supervision
- ☐ Personnel-Labor Relations
- ☐ Supervision

MECHANICAL and SHOP
- ☐ Diesel Engines
- ☐ Gas-Elec. Welding
- ☐ Industrial Engineering
- ☐ Industrial Instrumentation
- ☐ Industrial Metallurgy
- ☐ Industrial Safety
- ☐ Machine Shop Practice
- ☐ Mechanical Engineering
- ☐ Professional Engineer (Mech)
- ☐ Quality Control
- ☐ Reading Shop Blueprints
- ☐ Refrigeration and Air Conditioning
- ☐ Tool Design ☐ Tool Making

RADIO, TELEVISION
- ☐ General Electronics Tech.
- ☐ Industrial Electronics
- ☐ Practical Radio-TV Eng'g
- ☐ Practical Telephony
- ☐ Radio-TV Servicing

RAILROAD
- ☐ Car Inspector and Air Brake
- ☐ Diesel Electrician
- ☐ Diesel Engr. and Fireman
- ☐ Diesel Locomotive

STEAM and DIESEL POWER
- ☐ Combustion Engineering
- ☐ Power Plant Engineer
- ☐ Stationary Diesel Engr.
- ☐ Stationary Fireman

TEXTILE
- ☐ Carding and Spinning
- ☐ Cotton Manufacture
- ☐ Cotton Warping and Weaving
- ☐ Loom Fixing Technician
- ☐ Textile Designing
- ☐ Textile Finishing & Dyeing
- ☐ Throwing
- ☐ Warping and Weaving
- ☐ Worsted Manufacturing

Name_____ Age_____ Home Address_____

City_____ Zone_____ State_____ Working Hours_____ A.M. to P.M._____

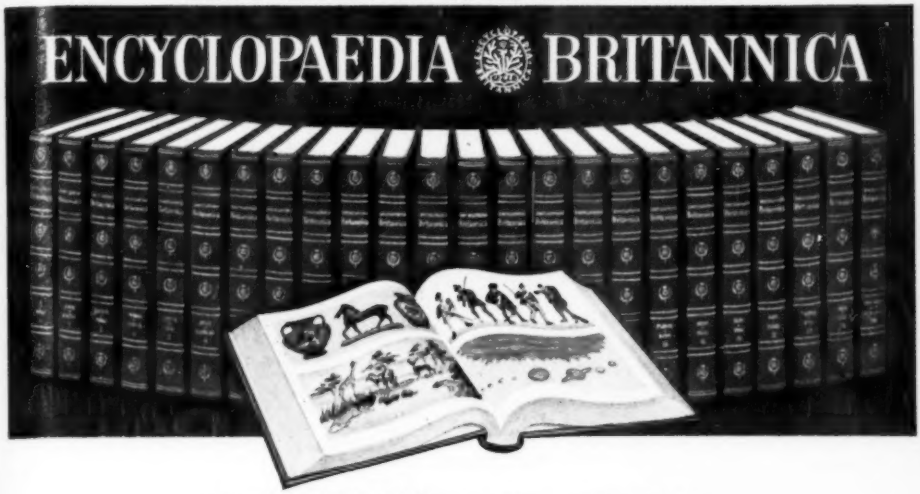
Occupation_____

Canadian residents send coupon to International Correspondence Schools, Canadian, Ltd., Montreal, Canada. . . . Special tuition rates to members of the U. S. Armed Forces.

PRINTED IN U.S.A.

New available . . . direct to you from the Publisher

BRAND NEW EDITION OF THE WORLD FAMOUS



You Get All 24 Volumes Now . . . Pay Later

On Easy . . . Book a Month Payment Plan

■ Yes, the latest edition of Britannica—the greatest treasure of knowledge ever published—is now being offered on a remarkable direct-from-the-publisher plan that puts this world-renowned reference library within reach of *every* family. All 24 volumes will be placed in your home NOW . . . you pay *later* on convenient budget terms. It's as *easy as buying a book a month.*

Savings Passed on to You

You may wonder how we're able to make this truly amazing offer. First, because of the great demand for this magnificent set, we have ordered a tremendous printing. This enormous printing materially reduces our costs and, under a remarkable *direct-from-the-publisher plan,* we pass these savings on to you.

Thousands of Subjects of Practical Value

In the brand-new edition of Britannica, you will find thousands of subjects that you and your family will refer to in the course of your normal day-to-day affairs. For example, you'll find special articles on household budgets, interior decorating, medicine and health, home remodeling, child care, adolescent problems, rules and regulations for all sports, every kind of hobby . . . plus a treasure house of knowledge on all subjects. Useable information that can save you many dollars.

New Edition is Profusely Illustrated

The new Britannica almost "televises" information with 23,494 magnificent illustrations. But it does not merely show "attractive" pictures—it is the work of 5,565 of the world's greatest authorities.

Britannica in your home can give you the broad knowledge that makes people listen when you talk, enabling you to speak factually and intelligently on the widest range of subjects.

Essential for Homework

For students, Britannica is indispensable. It is the largest and most complete reference set published in America. Its use develops the active, alert minds that bring success in school and later life.

Britannica has always been the symbol of a good home. It is a treasure house of knowledge that can open a richer, fuller, more successful life to every member of your family.

Preview Booklet Offered FREE

Simply fill in and mail the postcard today, and we will send you . . . *without cost or obligation* . . . a copy of our beautiful new booklet which contains an exciting preview of the latest edition of Encyclopaedia Britannica. There is no charge—not even for postage. It's yours *absolutely free!*

In color so beautifully etched it gives the illusion of a third dimension, you will see art treasures of famous museums, world landmarks, scientific wonders. Also pictured is the most magnificent scenery on the North American continent, a cruise through France, the mysterious Orient, a Pacific island, and a rocket trip to the moon.

Offer Limited

Just as soon as we receive your postcard, we will send your free booklet. There is no obligation, of course. However, this offer is necessarily limited, so mail the postcard *today.*

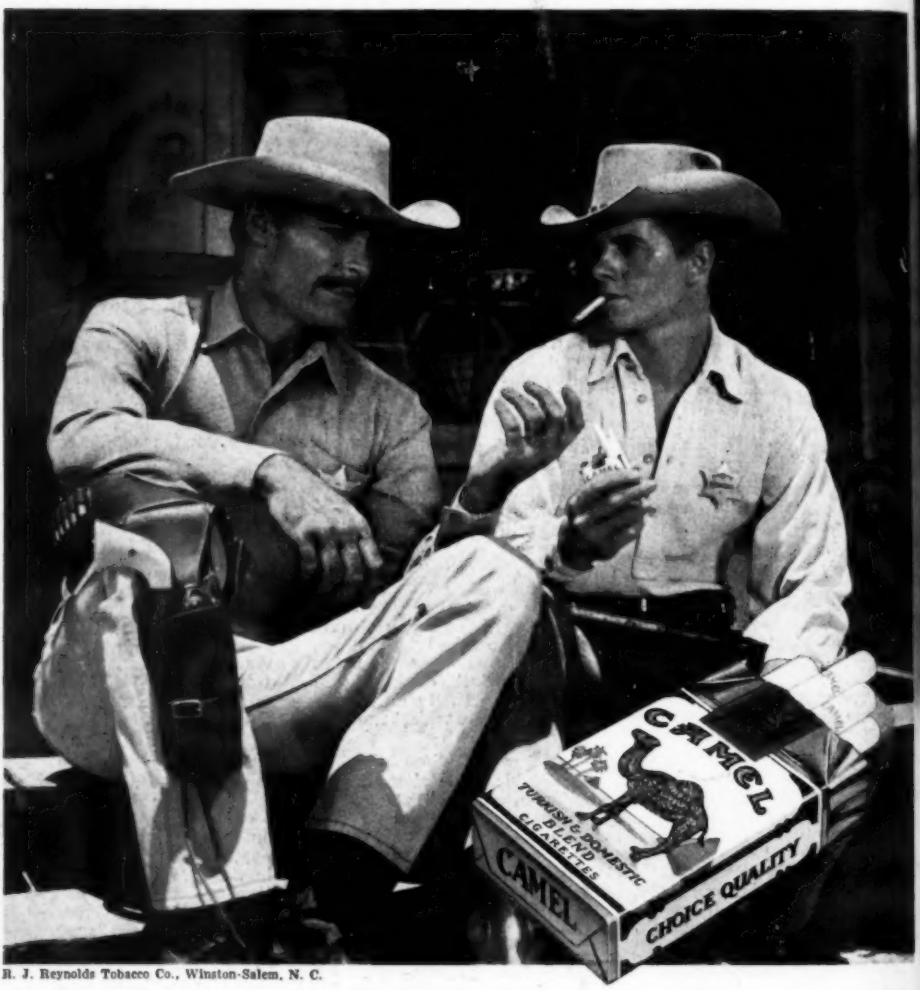
Clip and Mail for **FREE BOOKLET**

Caution: Be sure to clip on dotted line. Coupon becomes a FREE self-addressed postcard—needs no stamp or envelope.

Have a real cigarette—

have a CAMEL

Nobody beats Camel to the draw for rich tobacco flavor and easygoing mildness. "My kind of cigarette—no fads or fancy stuff," says "Lawman" star John Russell. Co-star Peter Brown goes along: "Tastes good, smokes mild." Today more people smoke Camels than any other brand. The best tobacco makes the best smoke.



R. J. Reynolds Tobacco Co., Winston-Salem, N. C.

Tune in Camel's exciting new "LAWMAN" on ABC-TV

HOW POISONED AIR IS SHORTENING YOUR LIFE

TON PUBLIC LIBRARY
MAR 24 '59

MECHANIX ILLUSTRATED

THE HOW-TO-DO MAGAZINE

Best Buy 25c APRIL

AMAZING NEW SAFETY CAR

HEAT YOUR HOME WITH SOLAR ENERGY

There's An Elmer's Glue for Every Job You Do!

ELMER'S®

GLUE CHART

FOR THE HOME HANDYMAN

Gluing Jobs	Special Requirements	The Glue To Use
For general interior gluing: wood, paper, pottery, cloth or other porous materials. Light wood assembly (joining, laminating, veneering, dowelling), novelties, toys, models, school projects and all types of repairs.	Good, transparent bond with speed and convenience. No mess, non-staining. Ready to use—no mixing.	**ELMER'S GLUE-ALL** The modern plastic glue in the handy squeeze bottle!
For gluing plastic laminates to wood without clamps . . . Formica, Micarta, Textolite, Parkwood, Consoweld, etc. to counter tops, tables, desks, kitchen cabinets, etc. For thin gauge metal or foil to wood. Also, leather, linoleum, synthetic rubber to other porous or non-porous surfaces.	Good bond not requiring heat or excessive pressure. Highly resistant to heat or moisture. Fireproof, non-toxic, easy to use.	**ELMER'S CONTACT CEMENT** Water based—non-flammable. Washes off hands and equipment with warm, soapy water.
For wood gluing where a waterproof bond is required . . . boats, outdoor furniture, sports equipment, window boxes and all types of outdoor gluing.	Maximum strength bond, completely waterproof with resistance to mold, fungus, acids, alkalis, solvents, boiling water, moist and dry heat. Lasting durability, excellent gap-filling qualities.	**ELMER'S WATERPROOF GLUE** Forms bond stronger than the wood itself!
For stainfree gluing of acid woods like oak, mahogany, etc. For furniture panels, cabinet-work, veneering . . . any job where a clean glue line is important.	Good, long-lasting, heat and water resistant bond. Easy to work with. Good gap-filling qualities. For use with clamps in a working temperature above 75°F.	**ELMER'S PLASTIC RESIN GLUE** Powdered Urea Resin Glue. Mixes easily in cold water.
For wood gluing where a reliable, economical glue is required. For outdoor gluing in low temperature. For heavy-duty wood work like laminating beams, gluing sashes and doors, counter tops, tables, etc.	Good water resistant bond. Easy to work with, regardless of temperature. Good gap-filling qualities. Inexpensive by comparison with many other glues. Should be used with clamps.	**ELMER'S CASEIN GLUE** Powdered casein. Easy to mix with cold water.

Borden's Products FOR THE HOME HANDYMAN

For technical information on special adhesives or free Gluing Guide write The Borden Company, Dept. F-4, 350 Madison Avenue, New York 17, New York.

There is no one glue that will do all jobs well, but with these five great Elmer glues, most home, farm, shop and school jobs can be done correctly. Tear out and keep this chart as a handy reference.

How are YOU getting to the top?

Are you job-climbing the hard way? Struggling to get ahead. Gaining ground slowly. Always in danger of slipping back.

Or are you getting an up-to-date lift? Riding a method that's sure and sound. Forging ahead of others. Rising to responsible positions by virtue of real ability.

Neither way is easy. Both require time, effort, real determination. But the I.C.S. method is faster because it's powered by *success*. Enrolling with I.C.S. is like being given a hand by the top men in your field.

Behind the 257 I.C.S. Courses, you find recognized authorities, personalized instruction, simplified texts, individual guidance—all you need to prepare for advancement.

Sound good? Then take a moment right now to get all the facts. Mark and mail the coupon below. At no cost and without obligation, you get complete details including three books: (1) Opportunity Handbook for the field of your choice, (2) 36-page pocket guide, "How to Succeed," (3) sample lesson (Math) demonstrating the I.C.S. method. With these, you can plan intelligently how best to get to the top.

For Real Job Security—Get an I. C. S. Diploma! **I. C. S., Scranton 15, Penna.**

Accredited Member, National Home Study Council

INTERNATIONAL CORRESPONDENCE SCHOOLS

ICS

BOX 46382C, SCRANTON 15, PENNA. (Partial list of 250 courses)

Without cost or obligation, send me "HOW to SUCCEED" and the opportunity booklet about the field BEFORE which I have marked X (plus sample lesson):

ARCHITECTURE and BUILDING CONSTRUCTION
- ☐ Air Conditioning
- ☐ Architecture
- ☐ Arch. Drawing and Designing
- ☐ Building Contractor
- ☐ Building Estimator
- ☐ Carpenter Builder
- ☐ Carpentry and Millwork
- ☐ Carpenter Foreman
- ☐ Heating
- ☐ Painting Contractor
- ☐ Plumbing
- ☐ Reading Arch. Blueprints

ART
- ☐ Commercial Art
- ☐ Magazine Illus.
- ☐ Show Card and Sign Lettering
- ☐ Sketching and Painting

AUTOMOTIVE
- ☐ Automobile
- ☐ Auto Body Rebuilding and Refinishing
- ☐ Auto Engine Tuneup
- ☐ Auto Technician

AVIATION
- ☐ Aero-Engineering Technology
- ☐ Aircraft & Engine Mechanic

BUSINESS
- ☐ Accounting
- ☐ Advertising
- ☐ Business Administration
- ☐ Business Management
- ☐ Cost Accounting
- ☐ Creative Salesmanship
- ☐ Managing a Small Business
- ☐ Professional Secretary
- ☐ Public Accounting
- ☐ Purchasing Agent
- ☐ Salesmanship
- ☐ Salesmanship and Management
- ☐ Traffic Management

CHEMICAL
- ☐ Analytical Chemistry
- ☐ Chemical Engineering
- ☐ Chem. Lab. Technician
- ☐ Elements of Nuclear Energy
- ☐ General Chemistry
- ☐ Natural Gas Prod. and Trans.
- ☐ Petroleum Prod. and Engr.
- ☐ Professional Engineer (Chem)
- ☐ Pulp and Paper Making

CIVIL ENGINEERING
- ☐ Civil Engineering
- ☐ Construction Engineering
- ☐ Highway Engineering
- ☐ Professional Engineer (Civil)
- ☐ Reading Struc. Blueprints
- ☐ Sanitary Engineer
- ☐ Structural Engineering
- ☐ Surveying and Mapping

DRAFTING
- ☐ Aircraft Drafting
- ☐ Architectural Drafting
- ☐ Drafting & Machine Design
- ☐ Electrical Drafting
- ☐ Mechanical Drafting
- ☐ Sheet Metal Drafting
- ☐ Structural Drafting

ELECTRICAL
- ☐ Electrical Engineering
- ☐ Elec. Engr. Technician
- ☐ Elec. Light and Power
- ☐ Practical Electrician
- ☐ Practical Lineman
- ☐ Professional Engineer (Elec)

HIGH SCHOOL
- ☐ High School Diploma
- ☐ Good English
- ☐ High School Mathematics
- ☐ High School Science
- ☐ Short Story Writing

LEADERSHIP
- ☐ Industrial Foremanship
- ☐ Industrial Supervision
- ☐ Personnel-Labor Relations
- ☐ Supervision

MECHANICAL and SHOP
- ☐ Diesel Engines
- ☐ Gas-Elec. Welding
- ☐ Industrial Engineering
- ☐ Industrial Instrumentation
- ☐ Industrial Metallurgy
- ☐ Industrial Safety
- ☐ Machine Shop Practice
- ☐ Mechanical Engineering
- ☐ Professional Engineer (Mech)
- ☐ Quality Control
- ☐ Reading Shop Blueprints
- ☐ Refrigeration and Air Conditioning
- ☐ Tool Design ☐ Tool Making

RADIO, TELEVISION
- ☐ General Electronics Tech.
- ☐ Industrial Electronics
- ☐ Practical Radio-TV Eng'g's
- ☐ Practical Telephony
- ☐ Radio-TV Servicing

RAILROAD
- ☐ Car Inspector and Air Brake
- ☐ Diesel Electrician
- ☐ Diesel Engr. and Fireman
- ☐ Diesel Locomotive

STEAM and DIESEL POWER
- ☐ Combustion Engineering
- ☐ Power Plant Engineer
- ☐ Stationary Diesel Engr.
- ☐ Stationary Fireman

TEXTILE
- ☐ Carding and Spinning
- ☐ Cotton Manufacture
- ☐ Cotton Warping and Weaving
- ☐ Loom Fixing Technician
- ☐ Textile Designing
- ☐ Textile Finishing & Dyeing
- ☐ Throwing
- ☐ Warping and Weaving
- ☐ Worsted Manufacturing

Name_____ Age_____ Home Address_____

City_____ Zone_____ State_____ Working Hours_____ A.M. to P.M._____

Occupation_____

Canadian residents send coupon to International Correspondence Schools, Canadian, Ltd., Montreal, Canada. . . . Special tuition rates to members of the U. S. Armed Forces.